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NOVEMBER 1958

THE MAGAZINE OF TASTE AND SCENT



Static Charge on Hair . . . page 25 • Flavomatics . . . page 49

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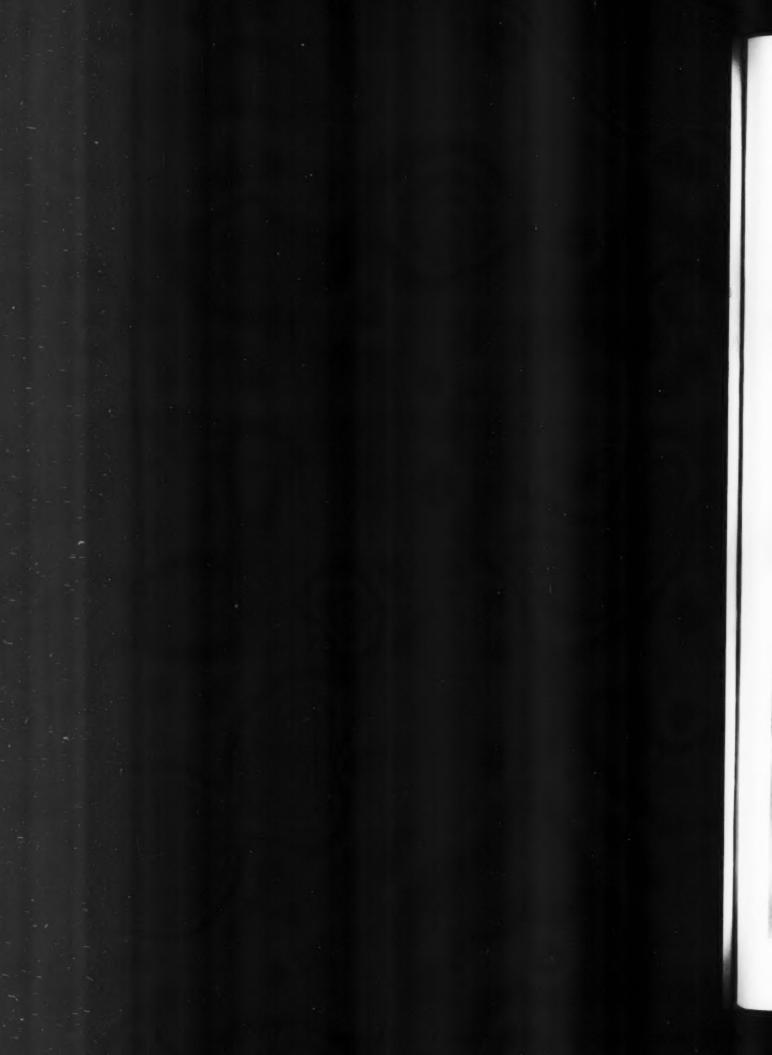
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VOL. 72, NO. 5

NOVEMBER 1958

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Area of Service

Some 52 years ago when the American Perfumer and Aromatics was established it was pledged to serve the cosmetic manufacturer in developing better products, better methods of production and better packaging.

Today this publication is as steadfast as ever to its dedicated purpose.

Much water has gone under the bridge of time. It is not the intention of this column to review the past, except to say that the cosmetic manufacturer, through good and bad times, also never faltered in his quest for improvement.

By and large a wide gulf of difference exists between today's technical know-how and that of even a decade ago.

This morning a little booklet came across my desk. It is issued by the Associated Business Papers, of which we are proud to be members. Permit me to quote from this booklet:

"Business papers exist simply because man—to get ahead in business—must have "know-how." Industries grow because research and engineering know-how develop new products, new techniques, whole new areas of business. America's economy feeds on know-how. It is a live, growing, changing thing . . . developing at an incredible pace. Business papers exist to report this growth. They penetrate every corner of the economy, distributing, interpreting and analyzing this know-how as fast as it sprouts. They are the lines of communication within and across industry and business.'

In just so many words does this booklet spell out our function. Happily our area of service is the cosmetic industry, which seems destined for a brighter and bigger future.

And we are making our plans accordingly, to more vigorously fulfill our role as a vital line of communication within the cosmetic industry.

James H. Moore, Jr. Publisher











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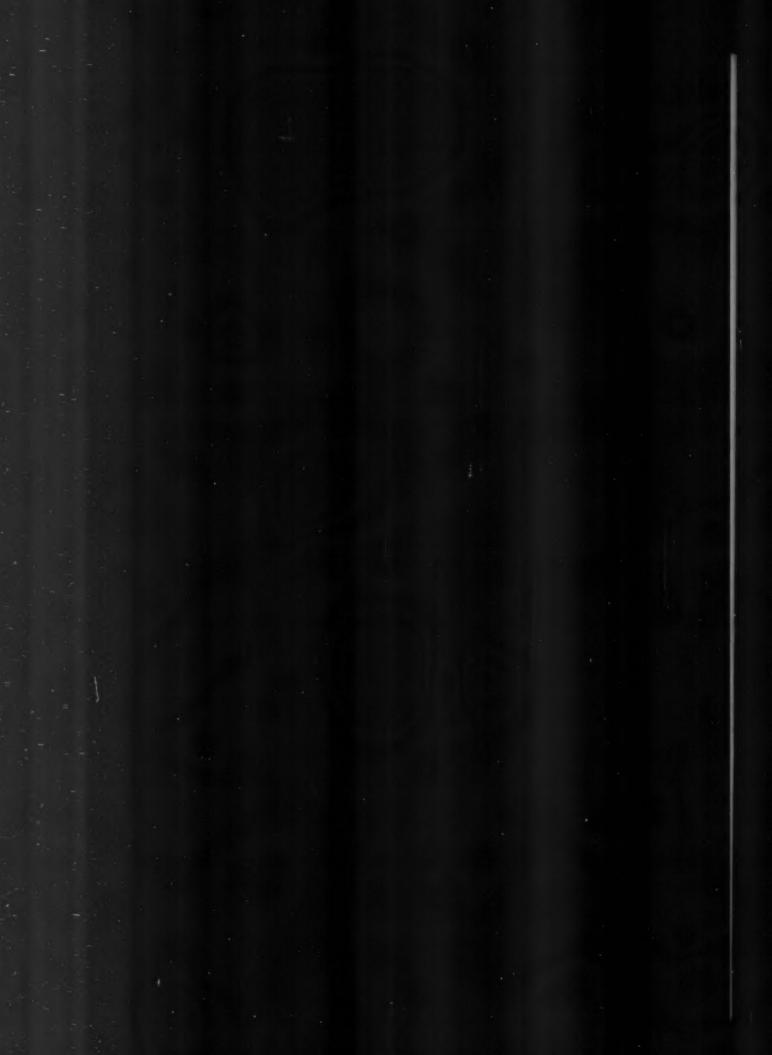




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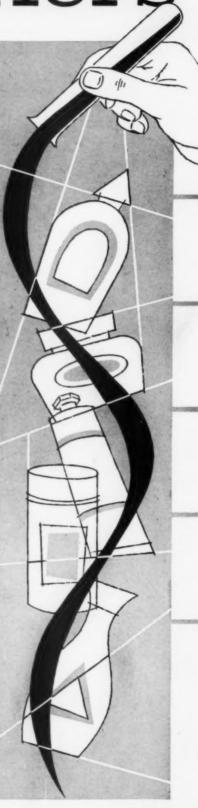
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Dr So



MINUTE NEWS .

Guides Against Deceptive Pricing Issued by F. T. C.

Dr. Ernest Guenther Honored by Society of Perfumers The Federal Trade Commission has adopted a nine point program to halt misleading and fictious pricing in the advertising and sale of merchandise. The guides are principally concerned with pricing practices and are intended to be used in determining the legal validity of various types of advertising. They appeared in the Federal Register of October 15. Very briefly the guides cover claims for savings, limitations, comparable and similar merchandise, special sales etc., two for one sales, half price sales, factory or wholesale prices, pre-ticketing and imperfect, irregular and seconds sales prices.

Dr. Ernest Guenther, vice president and technical director of Fritzsche Brothers Inc., New York City, received another fitting honor for his services to the industry from the American Society of Perfumers at its October 15 meeting when he was presented with a well designed plaque carrying this inscription: "Presented by the American Society of Perfumers to its esteemed member Dr. Ernest Guenther for his outstanding work in furthering the knowledge of essential oils so vital to the science and art of perfumery. October 15, 1958." The meeting was crowded to capacity with members of the association and leaders in the industry who roundly applauded Dr. Guenther when the presentation of the plaque was made by Mr. Masson after the introduction by Dr. O. L. Marton. Dr. Guenther with his usual modesty expressed his deep thanks for the honor accorded him. Following the presentation Dr. Guenther gave a lecture on the "Essential Oils of Africa" illustrated with color moving pictures which he took himself. Following the lecture which was much enjoyed, a question and answer period followed. Dr Guenther is recognised and known as one of the ablest scientists and one of the most widely known men in the industry throughout the world. He was born in Munich, Germany and studied chemistry at the University of Zurich under the Nobel Prize winner Dr. Paul Karrer. He received his doctorate in 1920. As an assistant to Prof. Albert Hesse, an expert on natural flower oils he became acquainted with the fascinating subject of essential oils. From 1920 to 1924 he worked as a chemist in various European branches of a leading cosmetic and soap manufacturer. Late in 1924 he became associated with Fritzsche Brothers Inc. in New York one of the oldest essential oil houses. Over 30 years of experience in the field, factory and laboratory have given him a wide and unique background and knowledge of essential oils. In fact he has personally investigated the production of every commercially important volatile oil in the country of its orgin. His reports have been published in many of the leading trade and technical journals of the United States and Europe. He is also widely known as a skilled lecturer on essential oils. In the course of his numerous trips to foreign countries he has taken many motion pictures which have been exhibited at meetings of various scientific and trade associations in the United States and Europe. He speaks and writes fluently in several languages. In 1940 he began work on his monumental six volume work. "The Essential Oils" which required over ten years for its completion. It is today accepted as the standard work on essential oils throughout the world. He is now preparing a seventh—supplementary—volume which will incorporate the latest information in the fields of chemistry and production and will be based on his recent investigations in various parts of the world. His travels in 1957 included a two month survey in the West Indies and six months in Africa. Throughout the industry he has earned the cognomen of "Mr. Essential Oil" bestowed on him originally by the present chairman of the American Society of Perfumers, Pierre Bouillette. At the conclusion of the meeting conducted with his usual skill by president Jacques A. Masson the thanks of the large audience present was extended to Dr. Guenther for his interesting lecture and services on behalf of the industry.

Outlets in Beauty and Barber Shops Sought for Shoe Shine A nation wide program to interest beauty and barber shops in distributing Holiday 20 Second Shoe Shine, a new polishing agent saturated in disposable cotton pads which needs no rubbing or brushing, has been launched by The Holiday Manufacturing Co., 1038 N. W. 21st Terrace, Miami, 42, Florida.

Odor Retentive Compounds
Offered by Tyrex

An increase in fragance retention life of 75 to 80% over previously known methods is claimed for the patented odor-retentive compounds just placed on the market by Tyrex Drug & Chemical Corp., 29 Pearl St., New York City. The compounds are described as saponified derivatives of natural essential oils which have a relatively low initial emission of the fragrance and a long fragrance life. It is expected that the features claimed will open applications for the compounds in many types of cosmetics and perfume. Scented nail polishes, lotions and hair lacquers it is claimed may be formulated with the aid of the new compounds to give a fragrance that will last for long periods without being unduly strong immediately after use. The new compounds, crystalline in form, are light in color and it is stated will not affect the shade of any tinted cosmetic in which they are incorporated. The compounds are completely soluble in alcohol and other solvents and, it is added by the makers, are miscible with all ingredients commonly used in perfumes and cosmetics. No change in production processes is involved in incorporating the new compounds into existing products they state.

Special Group of Manufacturers to Work on Safrol Problem

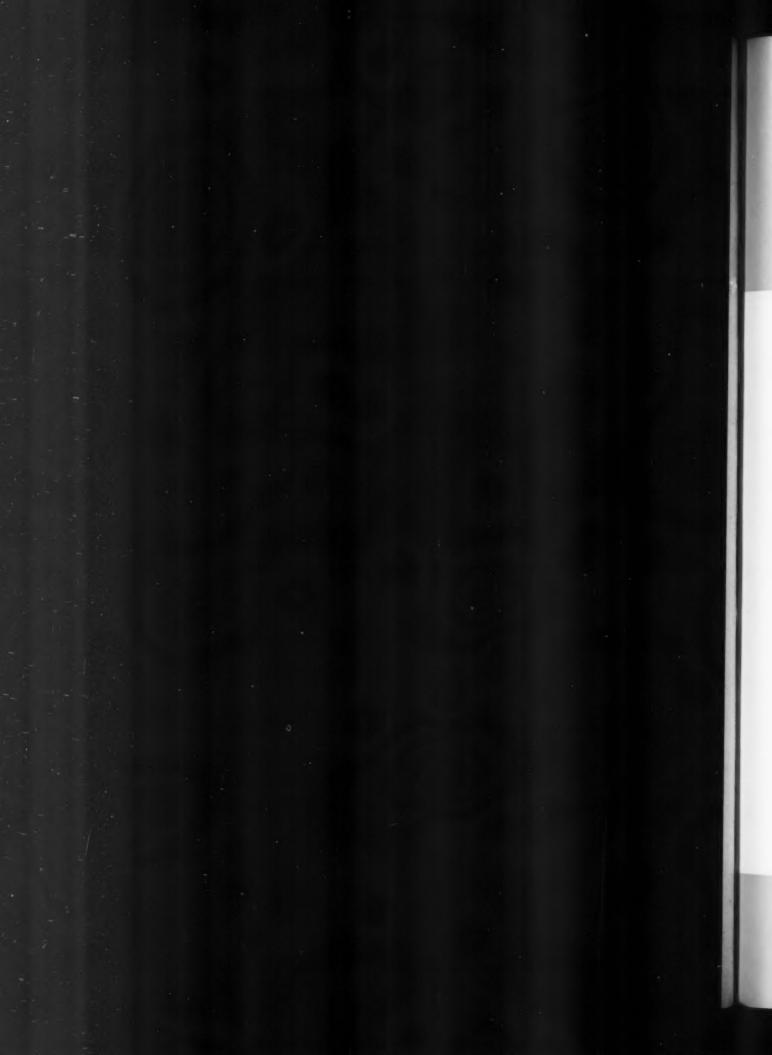
Evidence as to the safety, the manner of use and other relevant information on the Safrol problem has been secured by the Flavoring Extract Manufacturers Assn's Food Additive committee in the past year after working with the Food and Drug Administration. Most of what could profitably be done as an association has been accomplished and it is felt that remaining tasks could better be accomplished by a special group of flavor companies and root beer manufacturers principally concerned. The root beer industry agreed with this view and 24 interested representatives of 17 concerns recently met in New York. Out of this meeting came the definite recommendation that the root beer industry should sponsor additional one year toxicity tests on dogs and that the program should be set up and administered by a committee called the "Inter-Industry Committee on Safrol." The committee has been formed with William S. Conway Jr. chairman; Robert Rubenstein of the National Fruit & Syrup Mfrs. Assn., secretary; Harold Janovsky representing basic flavor manufacturers; J. O. Van Winkle representing the National Manufacturers of Beverage Flavors; and Richard L. Hall representing the Flavoring Extract Manufacturers Assn.

F. D. A. Seeks to Promote Better Understanding All Around To promote better understanding between the Food & Drug Administration, industry and consumers Dr. Arthur Flemming, Secretary of the Dept. of Health, Education and Welfare is arranging informal meetings with heads of national organizations concerned with the F. D. A.'s programs. A meeting for groups concerned with the manufacture, storage and distribution of foods is scheduled for December 11 in the Department's auditorium, 330 Independence Ave. S. W., Washington, D. C. In a letter to national organization heads, George P. Larrick, Commissioner of Food and Drugs points out that the Secretary wishes the views of industry on any subject or problem of general interest connected with the administration of the Food, Drug & Cosmetic Act.

Reasons Given by Women for Using Perfume

After an extensive and conclusive study of the fragrance market, Lentheric Inc. is convinced that the American woman has long reacted to the straight sex line of fragrance advertising with tongue-in-cheek. Her reasons for using perfume, unquestionably included sex appeal, the study revealed, but she stressed they encompassed many other aspects of her life: 1, The psychological to give her spirits a lift; 2. The emotional, to make her nice to be near; and 3. The fashionable, to complement and accent the different demands of her wardrobe. This thinking the company concludes is destined to put fragrance advertising in a more realistic world to which every woman could relate her life as it was and as it could be.





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AGRUMEN ALDEHYDE A chemical body which strengthens and refines

not only the fresh slightly green note, but also the characteristic and somewhat bitter nuance of the Citrus Oils in compounds.

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LATYRON-A... the fresh, invigorating note of new-mown hay.



PINE TSFN... faithful reproduction of delicate deep-woods pine needle scent.





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ROSE HV: Compounded rose base processed by extraction in presence of flowers other than Rose de Mai.

ROSE HM: The same base and process, with Rose de Mai.

CHENIRAX: Soluble product of extraction of Mousse de Chene and Gum Styrax.

CHENAMBROL: Soluble product of extraction of Mousse de Chene and Ciste. Available also decolorized. DISTIRIS: Reconstitution from fractions of natural oils other than Iris Butter, distilled over Iris Roots. DISTIRONE: Reconstitution of Absolute Iris (Irone) odor in a mixture subsequently distilled over Orris Roots.

You are invited to send for samples of any specialties that interest you.

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have recently returned from the Bonn Congress given by the newly formed German Cosmetic Society. One could not fail to be impressed by the magnificent way in which this congress was handled and full credit must go to Dr. Masch. their president, and his willing band of helpers. To bring about such a congress within one year of their formation is really a magnificent achievement. Not only were the papers of a high standard, but the social side of their activities was handled in an expert manner. I personally was delighted to meet a lot of my American friends. It was good to see Ed deNavarre and Sab. Strianse, Jack Quigg and their wives, to name but a few old friends, and to meet for the first time, the Bakers. However, as far as aerosols are concerned, I was particularly interested to meet S. Prussin of Aerosol Techniques. I had very much hoped that Mrs. Maria Wiener would have made the journey again this year so that we could have taken up our friendship where it appears to have left off at the Paris Conference. Unfortunately, I did not have this pleasure.

Aeratom Equipment

One receives in the post these days quite a lot of literature on the general subject of aerosols. A very fine presentation from Aeratom has been received and this contains some really excellent photographs of the Aeratom equipment. Anyone interested in setting up on his own should send for this book with its dozens of loose-leaf photographs. Of special interest would be the combined crimper and propellant charger. This piece of apparatus has been developed to allow firms interested in aerosols to carry out tests and to start small production runs. Aerotom 510B is indeed a miniature aerosol plant, but requires neither a motor nor a compressor as it may also be operated by nitrogen. It claims to fill between 300 and 1000 aerosol tins per hour. Aeratom 540 has electronic and pneumatic control and combines valve crimper and propellant charger. Aeratom 550 is for laboratory purposes of small production runs. For those interested,

their address is Aeratom A.G. Rapper-swil/SG, Switzerland.

Aerosol Technique Activities

I was interested also in Aerosol Techniques' new release. This announcemen. by H. R. Shepherd their president, tells us how they have brought their main operational area up to 90,000 sq ft. and they claim that this will make available to their customers the most extensive aerosol laboratory facilities in the World. They announce also construction of a new aerosol pharmaceutical manufacturing division. This division will specialise in the production of inhalation therapy aerosols, pressurized vitamin; antibiotics, steroids and allied products for the drug field. They say that 15 chemists together representing 125 years of experience in the aerosol and other chemical fields, will work in their new laboratories on research development, compounding and formulation of cosmetics, specialities, foods, proprietary medicines and pharmaceutical items. To quote from one section of the Aerosol Technique release, "Our new laboratory is bi-functional," Mr. Shepherd says, "in that it provides the most highly technical and efficient services in the fulfillment of customer requirements and also will be constantly engaged in pursuing our new products development program, which we have projected well into 1960.'

Mr. Shepherd has been a leader in the development of increased international collaboration in the aerosol field, of which he is a pioneer and acknowledged authority. He is editor of the forthcoming "Aerosol Encyclopedia," first compendum of the industry, and was for two terms chairman of the aerosol division of the Chemical Specialties Manufacturers' Assn.

International Aerosol Assn.

The International Aerosol Assn. released its No. 1 Bulletin in August. This is a very interesting little publication. The section dealing with the manufacturing and sales problems by Dr. H. Meuresch, is full of interest. He deals with valves, containers, filling machines, filling stations, centres of development, distribution centres and complaints. F. Schmutz of Switzerland gives an interesting review of the situation in 1958 compared with 1952. This refers to the situation of the United States. Other items of interest are the Aerosol Situation in Spain and Finland, a short summary of Freon C.318 as a propellant for food stuffs and finally, Air in Aerosol Containers. As a matter of interest, the address of the International Aerosol Assn. is Waisenhausstrasse 2, Zurich 1, Switzerland.

Herzka and Pickthall Book

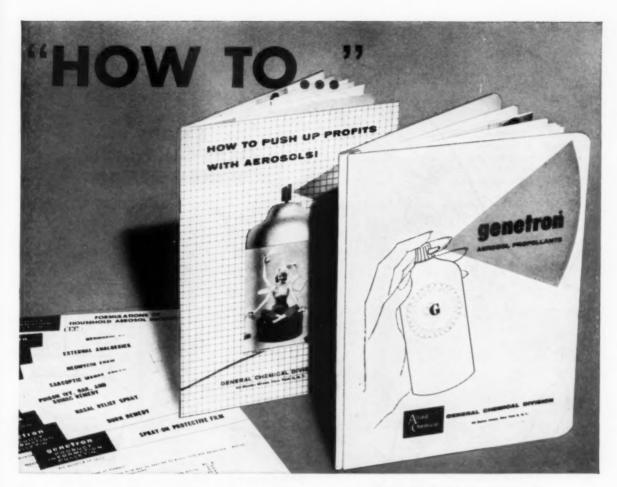
As I write, I am expecting the Herzka and Pickthall Aerosol Book to appear on my desk at any moment. Mind you, I have been expecting this for two months and I am still capable of exerting a little patience. I still feel vaguely surprised that someone in America has not anticipated us, but it looks as if our book will be the first. My co-author, Mr. Herzka, is well known to American readers especially on account of his "Survey of the Aerosol Situation in Great Britain' which appears regularly in the Aerosol Age. The fact that he is a glutton for work has made the appearance of this book possible and if it is not a success, then it will certainly not be Mr. Herzka's fault. To be perfectly honest, this book would never have been started had not my very good friend Ed deNavarre made the suggestion. The reasons for why it was not actually published in America are many, but I shall always regret that Mr. deNavarre did not have a bigger hand in matters. We have attempted in one book to give a tremendous amount of information to every section of the aerosol industry. This applies to both established manufacturers and to people who are still playing about with the id a of making aerosols. Having found myself in the position of critic to many publications, I sit back with some apprehension and await the reviews which will without doubt appear in due course. However, as I have not even seen the book in print. there is no point in speculating. The book is being published under the heading of "Pressurized Packaging (Aerosols)" Butterworth Scientific Publications. 88, Kingsway, London W.C.2.

We have attempted to deal with all the important items such as propellants, containers, valves, filling methods, laboratory procedures, emulsified systems, perfumes, cosmetics and many industrial preparations. Further, we have made a point of giving information on the names and addresses of the many suppliers to this industry.

Cold Relief in an Aerosol

Every now and again one comes across something rather out of the ordinary in Aerosol production. Cooper's "Medic-Aire" Cold Relief appears to come under this heading because it claims to relieve colds and kills airborne germs. The net weight of the contents is 5-ozs. and the formula is based on camphor, chlorbutol, oil of cinnamon, oil of eucalyptus, menthol, methyl salicylate, thymol, resorcinol and propylene glycol. The directions on the label are of interest. "For rapid

^{*} Chief Chemist, Polak & Schwarz, England, Ltd.



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Reheis can tailor any one of their anti-perspirant chemicals to meet the needs of your products. We suggest you write for free data and samples . . . and learn how Reheis quality can help your product's repeat-sales record. REHEIS CHLORHYDROL S-5 Anti-perspirant gives your product all these advantages.

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- Non-irritating to skin
- No buffering required
- Freshening astringent property



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relief of nasal congestion ('stuffiness') associated with colds, hay fever, catarrh, bronchitis etc., spray a short burst of about 2 seconds into the air of the room. This may be repeated as required. Do not spray directly into the eyes, nose or mouth. Children suffering from colds will breathe more easily and sleep more peacefully if Medic-aire is lightly sprayed in the nursery at bedtime. To lessen risk of infection by killing airborne germs, spray all sick rooms and living rooms regularly every morning, afternoon and evening until the risk of infection is over." This product sells in England at a price of 7/6d.

Nomenclature of Propellants

I have a lot of sympathy with the 'Aerosol Age' editorial, September, 1958. This deals with the unnecessary complications which arise as a result of manufacturers of propellants adopting their own nomenclatures.

Book Review

PERFUMES AND THEIR PRO-DUCTION by E. S. Maurer. United Trade Press, Ltd., 1958. 313 pages, size 6 x 9 inches, indexed. Price \$6.50.

Anyone who writes on perfumery must expect to be compared to Cola, Cerebelaud. Poucher and Winter to name a few. In this case it is not quite possible to make the comparison for the presentation would be on a somewhat more elementary basis. Furthermore, the approach is different. Many of the chemicals mentioned were unknown at the time of writing by the authors mentioned above. When the author's companion volume becomes available, a comparison may be possible.

The author is associated with one of the fine old French suppliers of perfumery materials and compounds which qualifies him to write on the subject at hand. This writing took the form of many articles in Soap, Perfumery and Cosmetics, some under his nom de plume "Charles Morel" which was shared with Fred Wells.

Maurer uses a somewhat different presentation of his material. The book is divided into two parts, one dealing with an introduction to the study and handling of perfumes, the other a discussion of perfumer's raw materials.

The "introduction" is elementary as the author says it is. The relationship of pharmacy and perfumery is interestingly drawn. All the suggestions are helpful to budding perfumers. This reviewer wishes he had them thirty years ago.

Though the materials have been

largely discussed by the author elsewhere, they still possess a magiclike interest for the reader. About thirty different groups of materials are discussed.

In writing about perfumery the "art" facet is indeed an important one. The chemistry facet is, however, no less essential. The author characterizes this relationship throughout the book. There is one statement on page 240 that seems a bit strong, namely, that "an ester is an equilibrium between two aldehydes." The example of benzyl acetate is then examined in this light from a functional point of view.

There appears to be a weakness in the discussion of the ambergris and musk odors and the chemical requirements for them, particularly in the light of recent studies.

All in all, this is a truly useful book because it is "workable." The raison d'etre is clearly presented. Simple and moderately complex formulations are used to illustrate the text. The material is clearly from the pen of a working perfumer.

The book is moderately priced so that when a companion volume on compounding appears later, it can easily complement the present work. -M. G. deNavarre



1308: HAIR COLOR RINSE

Q. We are anxious to obtain a formula for a semi-permanent hair color rinse, that would remain on the hair for about five to six weeks and will withstand shampooing during this time and does not rub off on linen, etc The colors in question are brown, black and slate or gun metal. P. S. L. Australia.

A. We wish it were possible to give you a formula for a semi-permanent hair color rinse. A coloring of this particular type is one everyone has been trying to get and some people claim to have developed such a product. They have done so, however, only at great expense, and we are not in a position to duplicate their efforts. The only other thing we can suggest is for you to take ordinary hair color rinse materials and dissolve them in either a liquid acid base or spread them on dry acid, such as citric or tartaric and use these to apply to the hair following a shampoo. The shades are rather difficult to elaborate, and if you are interested in this, we can make some suggestions for you.

1309: NONIONIC SOLUBILIZERS

Q. We would appreciate your comments on the following questions: (1) In view of the fact that nonionics containing ethoxy groupings tend to inactivate antiseptics, such as hexachlorophene, are there any nonionic solubilizers and emulsifiers that could be used with such antiseptics without the danger of inactivation? We are particularly interested in a nonionic for use as the emulsifier in an oil-in-water system? (2) When using a cationic antiseptic, such as benzalkonium chloride, in a medicated cosmetic product, how can one determine the excess to use over the required concentration to compensate for inactivation by free acids contained in other components of the preparation? (3) Are the chlorinated xylenols, such as PCMX and DCMX considered anionic, and if so, to what degree would they be incompatible with cationic antiseptics? R. F. P., Connecticut.

A. We would suggest that you go to the supplier of hexachlorophene and ask them if they have found a nonionic that can be safely used without losing its antiseptic properties. Obviously, this problem is very close to their heart, and if there is a solution to it, they would have the answer. In regard to your second question, the only way you can tell whether you have sufficient benzalkonium chloride in a product to overcome any inactivation of the preservative by the nonionic, is to make the necessary tests to find out. As for your last question, we would think that the chlorinated xylenols, such as PCMX and DCMX would probably behave as anionic compounds and the only way you could tell whether they were compatible would be to make a physical test. Incompatibility usually shows itself up by the formation of an insoluble precipitate. It is the insoluble character of the precipitate which renders the material useless. There are some applications for these insoluble precipitates so it is not necessarily valid to say that the antiseptic properties of a compound are gone just because they have been precipitated. Obviously, the compound must be soluble in something to manifest these antiseptic properties and the problem is to find the right medium.

1310: COLD CREAM SOAP

Q. We have received an inquiry from one of our customers for basic information on the preparation of a liquid soap with a cold cream base. We wonder whether you could give us any instructions for preparing such a product and thank you in advance for your kind assistance. R. A. B., N. J.

A. Your letter is not clear as to whether your client wants a liquid soap with a cold cream base that is transparent or opaque. If transparent, this is impossible to do. If opaque, the addition of cold cream or any related product to give the opalescence required, would render the soap practically non-lathering under the circumstances. Cold cream can be worked into bar soap to the extent of about 2 per cent, but we are afraid that working it into a liquid soap in this concentration would not give a stable product, unless the soap concentration was high.

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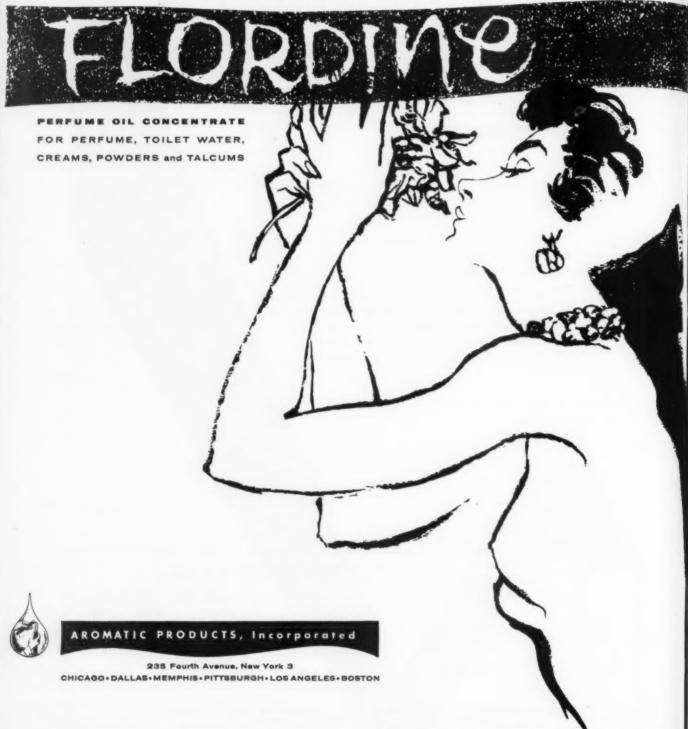
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ARSENIC IN DETERGENTS

In the course of analysing human hair for arsenic content, Lenihan, Smith and Chalmers (Nature, 181, 1463, 1958) encountered some unusually high arsenic figures for hair treated with detergents as compared to untreated controls. Among the detergents involved were products for laboratory use. kitchen washing and hair washing. Though the figures found for household detergents showed 59 and 74 p.p.m. arsenic, the hair preparation showed only 1.5 p.p.m.

Two things stand out from this coincidental work. First that hair can absorb arsenic from a shampoo. Second, certain types of sulfonation or sulfation can be a way of introducing large amounts of arsenic into the final product.

Perhaps surfactant manufacturers here should investigate the arsenic content of the materials they sell-if they don't already do

FATS, ESTROGENIC ACTIVITY, ETC.

The French journal Ann. Endocrinol., 18, 745, 1957, gives an extensive review of the estrogenic activity of various fats of both animal and vegetable origin. The amounts of estrogen are said to be significant in certain fats. Whether this activity is due to estrogenic steroids or to plant hormones, such as genistein as found in some grasses is not known. Schoop (Monatsh. Tierheilk, 9, 1, 1957) has written on this subject before. Soliman and Soliman find gonadotropic activity in date pollen grains.

Mor reported on estrogenic activity of 1500 rat units per 250 grams bread yeast (Giorn. Biochim., 5, 1, 1956). This might account in part for the local effect of yeast facials.

Also recently Ebling has studied the effect of estradiol and testosterone on the sebaceous glands of the spayed rat. Sebaceous gland volume was reduced by estradiol while testosterone enlarged them. This may explain oiliness of skins in boys particularly at puberty and possibly in women if the androgenestrogen balance is abnormal.

NOTES

Diacetyltomatidine is oxidized to form compounds valuable in drugs and cosmetics (German Patent 913,893) . . . The 21-undecylate of cortisone is a more lipoid soluble compound (German Patent 941,-283) than other forms The A. O. C. S., 1958 Short Course will soon be available in reprint form. Lots of useful stuff on soaps, detergents, fatty alcohols, surveys, ETO nonionics, alkalolamides, specialties and other chapters PVP is said to soften skin and its effect lasts after skin is washed . Taub, Meer and Clausen find that the best preservative for gum tragacanth is 0.2 per cent methyl plus 0.05 per cent propyl parahydroxybenzoates Gus Kass has patented the use of an oil soluble polyoxyethylene as a material for keeping lanolin in solution in vegetable or mineral oils at room temperature (U. S. Patent 2.840,509) . . The Kligman-Shelley concept of the stratum corneum acting as a "wick" drawing sebum out of the follicular reservoir by capillary attraction is not only interesting but quite plausible (J. Invest. Dermatol., 30, 99, 1958) The October 25th A.M.A. Journal, p

1169 indicates that warfarin sodium may cause alopecia, but that hair will regrow The same issue, in answer to a question regarding getting fat working in the fumes of a restaurant kitchen, the editor advises that that is not known to be possible and that if it does happen someone is snacking in between meals . . . Perfumer, mountain climber and photographer W. A. Poucher has an article in the October 2nd, issue of the British oublication Country Life on 'Climbs in the Coolins', with illuspublication trations made by the author I keep wondering about facial hair removers with a pH over 10 Sadgopal, well known worker in the field of Indian Indian aromatics has recently published a paper on the Indian Essential Oil Industry, Progress & Development Anyone in the lipstick business knows that the stain in lipstick varies a lot with the person using the lipstick. Hairston, (Stain Technology 30, 299) tried a number of eosine colorants at different pH levels and found variation in color and fixation Myer finds that p-hydoxybenzoates are reduced in preserving capacity in the presence of 7-hydroxyethyltheophylline-indeed it took 8 to 10 times the amount necessary in the absence of the theophylline dericarive Jacobi believes that chapping of skin is due to the removal of water soluble hygroscopic compounds in skin-by their removal the stratum corneum is no longer able to retain the needed water, the skin dries and becomes chapped Don Powers has been granted a patent on the use of lanolin and its polyoxyethylenesorbitol

Continued on Page 23

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compounds in end papers for permanent waving of hair Colgate is offering a new sodium alkyl aryl sulfonate 35% active in clear tan colored solution at a price that is almost a give-away-odor is better than the usual Van Dyk are also offering a new product, their Escalol 206, a specific chemical compound intended to filter out only the burning rays, let the tanning rays come through . Chemically Escalol 206 is ethyl pglucosyliminobenzoate Congratulations to friend Emil Klarmann for the award he is getting from the C. S. M. A. this December Incidentally I find that Earl Booth, of the famous per-fumer family, is doing consulting. In fact he has an idea that struck me as a different approach so no one gets stuck There are about a half dozen new societies of cosmetic chemists being formed around the world. The Belgian group changed its name to the Belgian Society of Cosmetic Chemists when we were there in September Wilson Martin are producing a water white almost odorless isopropyl myristate.

A Note on the Assay of Some Sulphydryl Compounds, by K. J. Steel (Dept. Pharmaceutics, School of Pharmacy, University of London, England). An assay of thioglycollic acid has been developed using potassium iodate solution which is considered to be as accurate as the Pharmacopoeial method. The proposed method has been applied to the assay of cysteine hydrochloride, dimercaprol and glutathione. J. Pharm. Pharmacol., 10, 574 (1958).

Will the Label Prevent Sales?

After you spend money making the product will your label permit you to sell it? This is to be the theme of the third day of the 45th annual meeting of the Chemical Specialties Manufacturers Assn. in the Hotel Commodore, New York City, December 8, 9 and 10. The first day will be taken up with committee meetings and the aerosol packaging awards will be presented on the second day. Special features are being arranged to mark the tenth anniversary of the Aerosol Division of the association.

Among the speakers are Osgood Tracy, president of the Enjay Co.; Fred Foy, chairman of board of the Koppers Co.; Dr. Leroy Burney, surgeon general U. S. Public Health Service; and Commissioner George P. Larrick of the F. D. A.

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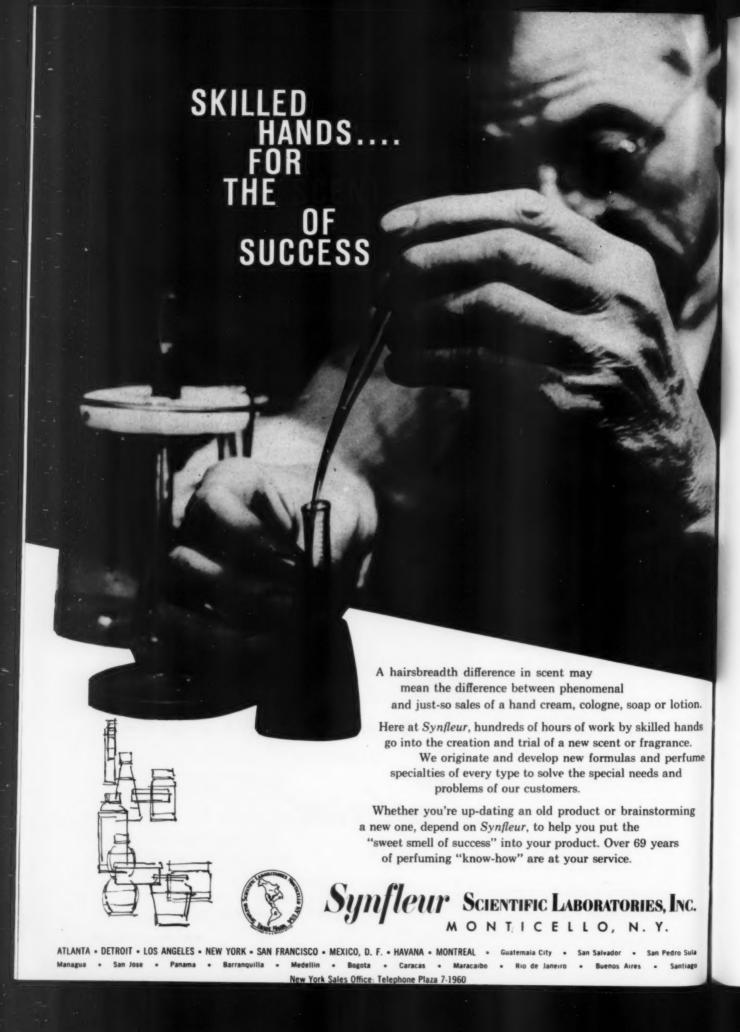
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Measurement of



on HAIR

CLARICE M. MILLS, VIRGINIA C. ESTER and HYMAN HENKIN*

he evaluation of hair properties and the effect of treatments, such as shampoos, rinses, etc., on these properties are matters of interest and importance to all who are engaged in the manufacture and sale of products for use on the hair. Estimation of some of these properties, as, for example, hair manageability, is subjective in nature and many have different meanings for different individuals; undoubtedly they are composites of other more fundamental properties. Other hair attributes are more amenable to direct scientific measurement and study of these properties may lead to a better understanding of some of the more complicated subjective shampoo characteristics. Such properties as "flyawayness" and ease of combing are at present not even clearly defined, much less subject to quantitative measurement. In our opinion both of these properties are related, at least to some extent, to the development and rate of dissipation of electrical charge on the hair fibers.

A study was undertaken of the measurement of static charge on hair and of some of the factors contributing to such charge. This problem bears a close relationship to the problems of static charge encountered in the manufacture of textiles and in the wearing of textile fabrics. Since the advent of synthetic fibers which are more hydrophobic in nature than the natural fibers, this has become a very important problem in the textile industry and considerable effort has been expended on methods of measuring static charge on textiles (1-3).

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Examination of the various test procedures described in the textile literature showed that none of them appeared completely applicable to the study of electrostatic properties of hair, either on heads or on separate tresses. Considerable time has been devoted in our own laboratories to the development of suitable test methods for such experimentation with hair and the following report covers some of the work which we have done along these lines.

The production of static charge developed on combing hair after a given treatment was studied in the following ways:

(a) By a direct measure of flyawayness due to static charge, which we have called the "ballooning method."

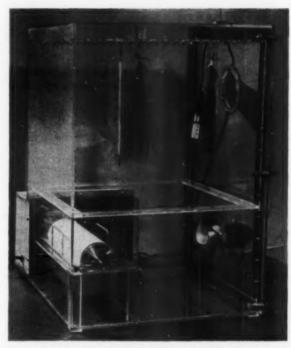


Figure 1.—Apparatus used in "ballooning" method, showing results of combining a shampooed tress of hair (left) and the effect of a subsequent creme rinse treatment (right).

In this method, a tress of hair which had been shampooed, creme rinsed, or otherwise treated was allowed to acclimate itself in a close cabinet having a saturated salt solution present to maintain the desired humidity. The apparatus (Fig. 1) was kept in a room which was air conditioned and during any given series of tests the temperature did not vary more than a few degrees. Swatches were introduced through the arm opening on the side, which was then closed for the acclimation period. After about twenty-four hours exposure to the



Figure 2a.—Apparatus used for measurement and photographing of charge, disassembled.

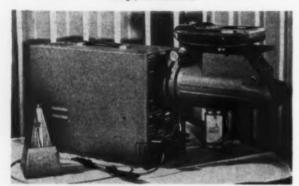


Figure 2b.—Apparatus used for measurement and photographing of charge, assembled.

desired humidity conditions, the tress was then combed by insertion of a hard rubber comb through the side opening and a fixed number of strokes given to the hair tress at a definite rate synchronized with the beat of a metronome. For hair tresses which permit build-up of static charge a ballooning of the hair tress takes place through mutual repulsion of the charged fibers. Figure 1 is a photograph of the apparatus containing two combed tresses. The difference in "ballooning" between the two tresses is apparent. The one on the right is a tress shampooed, then creme rinsed; the one on the left is shampooed only. As is generally known, creme rinses are used for the purpose of promoting greater ease of combing and elimination of "flyawayness." Under most experimental conditions this ballooning lasts for a sufficient length of time that a fairly accurate measurement may be made of the maximum spread of the hair fibers.

(b) In an attempt to obtain a more precise relative measurement of the static charge development and to compare the effect of various treatments on static charge we adapted a cathode ray oscillograph-camera arrangement for pick-up and recording of the charge or related electrical function developed by combing.* oscillograph we used was a duMont Type 304A to which we attached a Polaroid camera, Type 297, also obtained from duMont. The camera is capable of taking two exposures per frame. This permits photographing the results on a single frame of an experimental and a control treatment. A photograph of the apparatus is shown in Fig. 2. For work with hair tresses the humidity cabinet shown in Fig. 1 was used. Two gram tresses of human hair, approximately eight inches in length were used. After being shampooed or otherwise treated they were air dried and then suspended from hooks in the humidity cabinet, usually overnight, to come to equilibrium with the moisture in the cabinet. Combing was done in a standard fashion and at a rate synchronized with the beat of a metronome. It was found that

better reproducibility resulted when the teeth of the comb were started perpendicular to the tress at the top of the stroke. Usually the top third of the tress was not combed to avoid any effects due to close packing, near the top end of the tied tress. At least two separate determinations were made for each experiment and a standard shampoo was used as a control in all work to minimize differences due to type of hair, slight variation in humidity, etc.

For this test the back of the comb was laced with bare copper wire leading through a shielded, insulated holder and permitting transfer of electrical impulse from the comb to the vertical input terminal of the oscillograph. The measurement is that of a voltage or potential imposed on the oscillograph; since there is an inherent relation between voltage and charge we shall use the words "charge" or "static charge" exclusively throughout this paper. Actually, what is being measured is a function of the charge on the comb rather than on the hair; theoretically at least these two charges should be equal and opposite. Work which we have done on attempting to measure the charge left on the hair has given results similar to those obtained by measuring charge on the comb and was considerably more difficult to do as well as being less reproducible.

Feeding of the charge into the oscillograph produces a voltage imbalance which causes the deflection of the moving pip over the oscilloscope screen. The rate of transfer of the charge to the oscillograph is slowed down to an observable rate by use of a 0.03 microfarad condenser in parallel with the vertical input terminals of the instrument. Another auxiliary 10 microfarad condenser was used to lengthen the horizontal sweep time across the face of the oscillograph. The movement of the pip is photographed by use of the Polaroid camera; with proper control of the speed of combing and rate of sweep across the instrument it is possible to obtain a time exposure photograph showing the results of three or four successive combings.

Such a photograph is shown in Fig. 3a for the results of an experiment on combing a hair tress following a conventional shampoo treatment. The relatively high static charge obtained is evidenced by the height of the peaks above the base line. In Fig. 3b there is given for comparison the results obtained when the shampoo is followed by a cationic creme rinse treatment. The low peaks obtained after creme rinse as compared to the higher ones from the shampoo alone are an indication of the much smaller static charge developed. This difference in static charge accords well with the known antistatic properties of the cationics.

Good correlation has been observed between the height of the pip and the extent of ballooning in the previously described procedure.

(c) To carry the application of the oscillograph into even more realistic testing, work was undertaken to use the oscillograph method just described on models' heads by use of half-head techniques in which an experimental product was used on one side of the model's head and a control product on the other side. The procedure for determining static charge was identical with that already described except for the necessary modifications for dealings with live subjects. Tests were run in an air

Table I—Per Cent Reduction in Static Charge Using Creme Rinse Y or Z Following Shampoos A, B, C, D, E, F, G or H (Half-Head Technique on Models)

	Creme Rinse Y	Creme Rinse Z		Creme Rinse Y	Creme Rinse Z
Shampoo A	91,75	63,59	Shampoo D	83,75	72,78
	87,90	67,84	Shampoo E	85,74	85,46
	87,89	71,66	Shampoo F	85,79	80,73
Shampoo B	84.81	27,72	Shampoo H	79,64	75,75
Shampoo C	67.56	64,44		49,95	46,79

conditioned laboratory but necessarily without the precise control on humidity which we maintained on the tress work. Readings were taken within a few minutes after use of the hair dryer, merely permitting the hair to cool slightly before running the combing experiments. In Fig. 4 there is shown the entire operation of combing and photographing the results. One operator does the actual combing while the other takes the picture.

A study was made of the relative charge production, using half-head technique, of a number of leading shampoos as compared to the same shampoos followed by cationic rinse. Several different rinses were tried in these experiments. As will be seen in Table 1, in every case a substantial reduction was obtained on use of the cationic rinse. Per cent reduction was calculated from the differences of the summation of the peak values between the shampoo and shampoo plus rinse divided by the summation of the peak values for the shampoo. From the data in this table an idea may also be obtained of the reproducibility of these effects as measured by the oscilloscope.

This technique was also employed to determine the duration of creme rinse effect under actual usage conditions. Subjects were given a conventional whole head shampoo and oscillograph readings taken daily for a

Table 2—Oscillograph Readings Showing Duration of Creme Rinse Effects on Models

	After Treat- ment	2nd day	3rd Day	4th Day	5th Day	8th Day
Model I						
Shampoo	11.2	7.9	11.0	10.2	8.9	9.6
Shampoo + Rinse	1.1	1.1	2.2	1.8	2.9	7.5
Model II						
Shampoo	14.0	11.0	13.2	13.4	11.0	6.4
Shampoo + Rinse	2.5	1.9	3.4	3.4	3.2	7.6
Model III						
Shampoo	16.1	13.5	14.5	12.8	12.9	11.0
Shampoo + Rinse	1.8	3.4	5.4	6.1	8.7	11.0
Model IV						
Shampoo	12.2	12.2	10.2	14.6	9.7	9.9
Shampoo + Rinse	2.3	1.8	4.3	4.3	10.5	6.0

week. These subjects were then reshampooed with the same shampoo followed by a creme rinse treatment and oscillograph measurements made daily for another week. Comparative results are shown in Table 2.

In this particular study the antistatic effects were still quite visible on some heads on the fourth and fifth days after creme rinse treatment as may be seen by comparison with the results obtained with shampoo only. By the eighth day the effects had disappeared almost completely.

According to Hayek (4) and to McLean (3) antistatic agents are presumed to work through one of two mechanisms or possibly by a combination of the two mechanisms: (a) by providing a film of inherently lower electrical resistance or (b) by coating the fiber with a material which attracts moisture from the air-an adsorbed water film having a lower resistance than the untreated fiber surface. Particularly if the second mechanism is the predominant one a marked effect of relative humidity on antistatic properties would be expected. Such data has recently been reported by Keggin (5) on the effect of relative humidity on static charge using cotton and protein fibers. In Table 3 there is shown data on the effect of relative humidity on static charge development on hair tresses following treatment with several shampoos or rinses. As will be seen from the data and as might have been anticipated, static charge values are definitely lower at higher humidities both for the shampoos and for the rinses. At all three humidities, the effect of the cationic rinse is to cause a lower static charge than the shampoo alone. It is interesting to note that it is necessary to go to high humidities (about 75



Figure 4.—Procedure used for measurement and recording of charge generated in combing of model's hair.

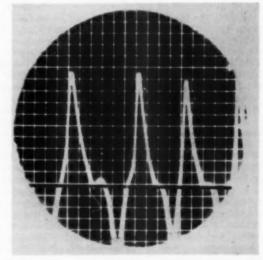


Figure 3a.—Charge generated by combing hairtress following shampoo.

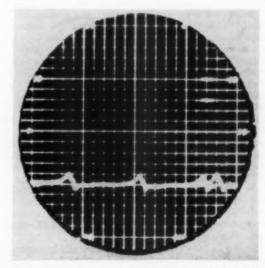


Figure 3b.—Charge generated by combing hair tress following shampon plus creme rinse.

per cent) to obtain low static charge values with shampoos similar to those obtained with cationics at much lower humidities. This may be due to the cationic treated hair adsorbing more water than untreated hair at any given humidity, thereby diminishing static charge.

Table 3-Effect of Relative Humidity on Static Charge After Use of

	27 % R.H.	51% R.H.	76.5% R.H
Shampoo J	14.3	10.8	3.3
Shampoo K	11.5	6.8	2.2
Rinse C	2.0	0.8	0.4
Rinse D	2.6	1.3	0.4
Rinse E	2.5	1.5	0.4
Rinse F	3.8	2.1	0.5

The question arises as to whether we are measuring an inherently lower static charge production or a more rapid rate of dissipation of the charge which is produced. This cannot be answered unequivocally at this time but from the data we have obtained, especially the low rate of charge leakage from charged tresses, we are led to believe that the primary effect of the cationics is to permit only a low charge build-up rather than to assist in dissipation of the charge. The possibility that the effect of the treatment may also be that of reducing surface friction by deposition of a lubricating film should not be overlooked. We should also consider that the antistatic properties of cationics may be due not necessarily to greater effectiveness per se but also to the fact that they are quite substantive to hair and leave a greater deposit of material on the hair than other compounds which might be equally effective, weight for weight.

It should not be inferred from the above discussion that the only effective compositions for reducing static charge are the cationic creme rinses. Work has been done with other postshampoo treatments, some of which were found by the above techniques, to be quite effective in lowering static charge. In this category may be mentioned a commercial creme rinse product which, on analysis, was found to contain no cationic but to be based on a superfatted anionic detergent.

No attempt should be made from the data presented in Tables 1 and 2 to draw any indirect comparisons among the various shampoos as to their relative antistatic properties. These are studies of the effect of creme rinses and not a comparison study of the shampoos used. The actual peak values taken from the photographs will vary with the type of hair, with the length of hair, hair condition, relative humidity, method of combing and probably many other variables so that the only valid comparisons which may be made among shampoos are such as were shown in Table 3 where shampoos were compared at the same time on swatches taken from a homogeneous tress (or compared directly in half-head tests)

We have attempted, both by half-head technique on models and by direct comparison using purchased hair tresses, to compare shampoos for their relative antistatic properties. In general, it may be said that this program did not prove nearly as successful as the work on the effect of creme rinse. We have seen some differences in static charge development after different shampoo treatments. These differences have been on the whole, small and not statistically significant. Considerable difficulty has been encountered in reproducing results and frequently results would reverse themselves or conflicting data would be obtained from the experiments on models and on tresses.

We now believe that part of the difficulty in evaluating shampoos by this technique is inherent in the experimental set-up. It will be obvious that in the case of an essentially nonconducting substance such as hair or a comb only a portion of the total generated charge is picked up and transmitted to the oscillograph. While fluctuations in the per cent of the pick-up are probably of minor importance when comparing a good antistatic agent, such as a cationic, with an anionic shampoo these fluctuations may be of overriding importance when comparing two materials of more or less similar properties, such as two shampoos.

In addition there is also the probability that there is a loss of a portion of the charge supplied to the oscillograph because of the insufficiently high impedance of the instrument and because of the necessity of introducing a condenser into the system to slow down the charge being fed into the oscillograph. Here again, where large differences are involved as in the case of shampoo versus creme rinse these sources of potential error do not appear important but may definitely affect comparisons between shampoos.

To summarize our present knowledge of the effects of rinses and shampoos on static charge generation, we believe that we have shown a large and significant effect of creme rinse on reduction of static charge by use of the apparatus and procedure described in this paper. In some experiments the results were significant to the greater than 0.001 level by the standard "t" test. We cannot at this time draw any such conclusions as to differences in antistatic properties due to use of different shampoos. While such differences may exist, we have no substantiating evidence from this oscillograph work. In our opinion a method is needed which will not only be more precise and freer of electrical complications than the above described method, but also one which will measure the effect of the entire charge generated rather than a portion of it. We feel that such a procedure when developed and applied to this problem will lead to a clearer understanding of the relative antistatic properties of shampoos and other hair treatments.

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Fundamental and Comparative Actions Cleansing Creams



ALBERT R. LATVEN*

Although cleansing creams are purported to produce a number of beneficial effects upon the skin, their primary effect and fundamental use is as cleansing agents. The nature of this cleansing action has not been clear particularly in view of the fact that plain soaps are said to be equally effective in removing dirt and other foreign matter from the surface of the skin. However, since it is unlikely that cleansing cosmetic preparations would have received continued use for centuries in the absence of superior cleansing action, the cosmetic chemist has justly accepted the presence of superior cleansing properties and has formulated his products more or less on an empirical basis. It is the purpose of this paper to present hitherto unreported observations concerning the effects of cleansing creams and other products upon a specific type of natural skin oil, namely, upon sebum which has solidified in the form of "plaques" over the sebaceous or pilosebaceous orifices. The studies to be presented are preliminary in character and have been conducted as a matter of experimental orientation; it is hoped that the findings may serve as a guide to the refinement of less subjective techniques.

While pursuing studies along unrelated lines, we confirmed the published observation that the sebum lying in the exit of the sebaceous duct fluoresces white to yellow or orange when illuminated by filtered ultraviolet light. However, we also observed that the majority of the yellow and orange fluorescent points consisted of sebum which had solidified in the form of a "cap" loosely covering, but nevertheless adhered to, the surface opening of the sebaceous gland. These caps, or plaques, could be pried loose with a sharp instrument such as a scalpel or razor blade and were surprisingly resistant to removal by scrubbing with soap-and-water. They were not grossly apparent under ordinary conditions of illumination. Although present over most of the body surface, these sebal plaques were most numerous on protected areas such as the chest or back and on those areas subject to drying and cold such as the forehead, cheeks or chin. They have been consistently found to be present on the facial skin of men and much less frequently on the facial skin of women. (It is of further interest to note that solidified sebum was found in greater abundance on the facial skin of men who shave electrically than on those using lather and razor.)

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TABLE I

Product	Individual Scores					Average Score
Cleansing Cream A	++	++	+++	++	++	2.2
Cleansing Cream B	+++	++	++	++	++	2.2
Cleansing Cream C	+++	++	+++	+++	++	2.6
Cleansing Cream D	+++	+++	+++	+++	+++	3.0
Silicone grease	0	0	0	0	0	0
Salts	0	0	0	0	0	0
Milk	+	0	+	++	0	0.8
Span 20	+	+	+	+	0	0.8
Tween 85	+	+	+	+	0	0.8
Petrolatum	+	++	+	+	++	1.4
Lanolin, toilet	+	++	++	+	++	1.6
Hydrogenated Lard	+-+-	++	+++	++	++	2.0
Polyethylene Glycol 400	+++	+++	++	++	+++	2.6
Olive oil	++	+++	+++	++	+++	2.6

These sebal plaques have received scant attention in the published literature. Since their presence is incompatible with the presumed functions of sebum, the foregoing observations suggested the possibility that the efficacy of cleansing creams may lie in their ability to dislodge and remove these plaques from the orifices of the sebaceous ducts; initial experiments revealed such preparations to be more effective indeed than the common soan-and-water scrub. It was of interest therefore to determine if differences in the relative efficiencies of commercial preparations could be demonstrated and to further investigate the properties of some of the individual ingredients in the hope that the findings might confirm or shed light on the nature of the action of such cosmetic preparations. (It should be emphasized that the studies which follow were concerned with the removal of sebal plaques and not with the removal of the surface lipid layer of sebum; the latter is indisputably essential to the integrity of normal, healthy skin.)

Experimental

The skin of the normal female back was illuminated by filtered ultraviolet light (3600 Angstroms) and individual sites were chosen for study based on the presence of evenly distributed fluorescent sebum deposits. Each of four commercial cleansing creams was then applied to a 2 × 2 cm. gauze swatch and secured to the experimental site with adhesive tape. After a contact time of fifty minutes, the swatches were removed and the areas wiped dry with cleansing tissue. The treated sites were then examined for changes in the number of sebum deposits by comparison with adjacent untreated areas and scored visually as follows: zero, no effect; single plus, slight effect; double plus, marked effect; and triple plus, pronounced effect. Experiments were repeated at least five times using the cross-over experimental design with several subjects. The findings are presented in Table I and indicate that differences in efficiency, albeit minor in degree, could be detected by gross subjective observation among the four preparations.

It should be mentioned that plaque removal could be accomplished in a matter of minutes by applying friction to the treated areas. Unfortunately, it was found difficult to apply the same uniform degree of friction to the several treated sites; also, such friction invariably resulted in a pronounced darkening of the area (under ultraviolet illumination only) thereby rendering the results difficult to evaluate. This procedure was therefore discarded for the purposes of the present investigation.

Based on the findings obtained with the cleansing creams, similar experiments were conducted with a number of individual ingredients. The latter were chosen at complete random—those which happened to be conveniently at hand—and by no means were intended to represent a cross-section of ingredients commonly used. The findings, also presented in Table I, indicate a marked spread of efficacy among the products with oleaginous substances being the most effective.

In view of the known lipoidal nature of sebum, the solubilizing properties of a series of fat solvents were also studied. These included acetone, chloroform, glycerol, kerosene, white gasoline, dioxane, trichloroethylene and ethanol (95 per cent). Because of their topical irritant properties, extended applications were avoided; instead, they were applied to the skin by means of a saturated cotton swab and rubbed into the area for a period of sixty seconds. Surprisingly, none of these solvents were found to be effective in removing the solid sebum plaques; however, they effectively removed the surface oily layer rendering the treated areas dry and uncomfortable.

Discussion

The sebaceous gland has been exhaustively reviewed by Rothman (1) and by Montagna (2) among others. From a physiological point of view, these glandular elements have been studied in reference to structure, distribution, mechanism of excretion and chemical composition of the excreted products. The glands are present in the skin over most of the body surface with marked regional differences in concentration and are apparently absent only in the palms, soles and foot. The excreted product is composed of lipids and cell debris and compositional studies have shown the lipids to contain both saturated and unsaturated fatty acids with odd numbers of carbon atoms and also to contain large quantities of waxes (3-5); lipids possessing such characteristics and such composition have not been found to exist elsewhere in the body indicating sebum to be synthesized through highly specific biochemical processes (6). From a pathological point of view, the sebaceous glands are immediately involved in the formation of comedones (blackheads) and in the development of seborrheic dermatitis, acne and various skin blemishes. Finally, from a functional point of view, 1,2), sebum is known to possess fungicidal (7) and bactericidal activities (8), to be involved in the normal keratinization process and to be an essential component in the radiation synthesis of vitamin D. Although these properties have not been completely elucidated, it is obvious that sebaceous glands, as one of the fundamental structural units of the skin, are essential to the maintenance of skin normality.



Figure 1.—The human female nose showing the fluorescence of sebum lying in and upon the surface ducts.

The observations reported herein demonstrate that in addition to the recognized lipid surface film affected by sebaceous gland activity, solidification of the excreted sebum occurs to the extent of forming a "cap" upon the surface aperture of the glandular duct. It is not within the scope of this paper to demonstrate the undesirability of such a situation nor to infer in any way that plugging of the sebaceous canal may occur as a consequence. However, it is pointed out that the existence of such plaques does not conform with any of the suggested concepts regarding the purposes and functions of excreted sebum. In view of the remarkable adherence of these plaques to the skin, it is not difficult to speculate that they might become local sites of bacterial growth followed by subsequent invasion of the glandular element itself (especially anaerobically); in this regard, it has long been known that excreted sebum may rapidly become rancid following deposition upon the skin surface.

Cosmetically, it is conceivable that inspissated sebum adheres to foreign soil with the same tenacity as it itself adheres to the skin. Under these conditions, cleansing with soap and water could hardly effect removal of this foreign debris as indicated by the studies reported herein. This, obviously is one of the major differences in cleansing action between soaps and cleansing creams. Another basic difference is that the emulsifying proper-

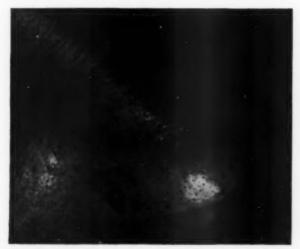


Figure 2.—Same as Figure 1 showing the architectural extrusion of the glandular contents prior to treatment.

ties of soap result in the removal of a good portion of the surface lipid film, thereby causing so-called "skin dryness."

Summary

Under filtered ultraviolet illumination, inspissated sebum in the form of minute plaques lying upon the sebaceous orifices has been observed to be commonly present in all subjects examined. These plaques are resistant to removal by soap and water but are readily removed by cleansing creams and other preparations; differences in efficacy have been observed among four commercial cleansing creams and among an arbitrary series of individual ingredients. These findings suggest the possibility that one of the fundamental virtues of cleansing creams may be their ability to facilitate removal of these sebal plaques without seriously altering the surface lipid layer.

Notes in Reference to Figures

Serious difficulties were encountered in obtaining satisfactory photographs of fluorescent inspissated sebum in vivo because of ultraviolet film sensitivity, et cetera.



Figure 3.—Same as Figure 1 following treatment of the area with cleansing cream for sixty seconds showing the absence of glandular excretion in the surface pores.

Under intense filtered ultraviolet illumination, fluorescent areas could be clearly focused upon the ground glass of the camera but curiously did not appear in the processed panchromatic negatives. However, it was discovered that when a pale yellow filter was used on the lens during exposure, the fluorescent sites were recorded in excellent detail and were greatly dependent upon the density of the particular filter used. The accompanying figures are presented as general examples of sebum fluorescence and glandular excretion. All were photographed by Lewis J. Sunny, B.P.A., using filtered ultraviolet right as the sole source of illumination.

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Cocktails at deWitte, Amersfoort, Holland

The story of this tour should be prefaced with a number of qualifying statements. The purpose of the tour was threefold. First to hear and discuss scientific papers with contemporaries in Italy, Germany and Denmark; second, to attend a meeting in Bonn to discuss further plans for international federation of societies of cosmetic chemists; third, to inaugurate the first general meeting of the German Society of Cosmetic Chemists celebrating its first anniversary.

The meeting of scores of fellow chemists, the visits to chemical and cosmetic factories, the receptions, cocktail parties and banquets were merely garnishment on the main course.

The headache of having hotels changed in three of six cities, the lack of rooms with bath in some cities, the absence of free time for personal affairs, the continual rush to maintain transportation schedules, the occasional mix-up in luggage were a few of the trials that are part of a group tour. With all this, and in spite of it, S. C. C. Secretary Bob Kramer and his wife Lucille never lost their composure and graciousness. The tour group are indeed grateful to them.

Second S. C. C. European Tour

MAISON G. DeNAVARRE



Officers and Delegates from the seventeen countries represented at the International Congress of the Society of German Cosmetic Chemists in Bonn, Germany



Dr. Robert Marriott of England and Dr. Sebastion Sabetay of France, at the banquet given by the Society of German Cosmetic Chemists in the Petersburg Hotel in Bonn,



In this group at the Esperis Plant in Milan are N. Winarick, M. G. DeNavarre, "Hank" van Ameringen, Carrol Reiss, and Adrien Fayaud.

Difference Between Tourist and Economy Flights

We took off for Rome on Pan American Economy Flight No. 64 at 5:00 p.m., on Friday, September 5th. The difference between Economy and Tourist flights is about 8 inches less leg room, snack dinners and essentially Continental breakfast for a difference of \$90 ± per head on Economy Class. Also you can't buy a drink. If you don't bring one, you go dry.

(Unless you know, water is not usually served at European meals. It is for washing. You can drink bottled water-but most prefer wine. Hence, the regular reference to wines of the various regions as we moved along).

Going eastward at an altitude of 25,000 feet, night suddenly turns to daylight about 2:00 a.m. E.S.T. The north coast of France passed below. It was raining lightly when we landed at Orly airport to refuel and to convert the "economy" part of the ship into "tourist." It was Saturday morning. In an hour we were off for Rome's Ciampino Airport. In Rome our chartered bus took us via the new Appian Way, through the city which



James Baker, president of the Society of Cosmetic Chemists of the U.S.A., addressing the International Congress in Bonn.



Dr. Ludwig-Wilhelm Masch, president of the Society of German Cosmetic Chemists, giving the opening address.



From the left, Dr. Nadja Avalle, Switzerland; Dr. Sebastion Sabetay, France; William Rowe Littlejohn, England; and Louis Schmuck, France.

was mostly siesta-ing at this hour (2:00 p.m.), past the U. S. Embassy to the Hotels Majestic and Savoia.

After unpacking everyone took a much needed nap. Dinner was on the terrace under a sky studded with endless sparklers. Bobbie and Margot Marriott arrived as we were completing our fruit compote. Their BOAC flight had been delayed for hours in London. We dawdled over the dessert to give them a chance to catch up. We all finished in time for some Bisquit to help us assimilate a six-hour difference in time.

Sunday to Mass at the old Capuchin monastery across the street, then as a group, the Bakers, Kramers, Strianses, Marriotts and deNavarres went to St. Peter's Cathedral. Jeanette and I had seen it before but this time we had a chance to hear the choir serving at solemn High Mass at the Papal Altar, which was designed by Bernini and Du Quesnay. The Basilica is no less than amazingly magnificent. It is probably the largest church in the world.

Visit to Vatican City

Bob Kramer arranged with a student priest to take us through the crypts beneath St. Peter's and Vatican City where many of the martyrs and some of the Popes have been buried. The reconstruction work, begun some years ago, brought many historical relics to light. Some of these are embedded in the walls.

We visited the souvenir shop and the post office. The Strianses and we began walking across the great piazza San Pietro, the remarkable Bernini colonnade, past Caligula's obelisk into the Via della Conciliazioni, taking pictures, pictures, pictures. A spot of refreshment at a sidewalk cafe then back to the Majestic for lunch and a trip to Villa d'Este in Tivoli, the playground of early Romans. The fabulous gardens with their many fountains are a photographer's paradise. It is a scene long remembered.

Sunday was an anniversary for the Strianses. What started out as a dinner foursome ended up with eight dining at a spot chosen by Johnny Garizzio, called the Capriccio, on Via Lombarda. The theatrical and movie set frequent this spot and sure enough, Anna Magnani sat at a table at my right. We toasted the Strianses with molto Bardolino, then settled down to Canneloni, a house specialty with molto etcetera.

Our flight left for Milan at 1:00 p.m. on Monday via Alitalia, arriving at Malpensa Airport at 3:00 p.m. The serious part of the tour began here.

Dr. Paolo Rovesti, Signorina Swampa (his Englishspeaking secretary) and Guido Roccheggiani were awaiting us. They had an astonishing program planned; but first to the Hotel Monopole de la Garre (everyone had a bathroom). Starting with a cocktail party at the Martini and Rossi penthouse atop a financial building overlooking the Piazza Duomo, a group of us ended up as guests of Sr. Vittorio Puerari (Max Factor) for dinner at the Taverna della Giarretiera in the Galleria Vittorio Emanuele. I had been working on Rossi cocktails (Vodka and Italian M&R) so it was difficult to remember the sequence of things. Seemed like we had an Orvieto followed by a Brolio Chianti mixed in with a little appetizer of Prosciutto and an entré of Pollo alla Diavola or something like that. At this point I do remember the room looked like the catacombs with low, arched brick ceilings, softly illuminated. . . .

Mayor Greets S.C.C. Group

Tuesday morning, September 9th, we toured the city, spent considerable time at the Refettorio del Convento di Santa Maria delle Grazie, where still can be seen the revered tempera by da Vinci, "The Last Supper;" then still more time at the massive and renowned Duomo

Cathedral; we drove past the La Scala Opera House, since it was closed, eventually arriving at the Monumental cemetery—a place where only the extremely wealthy are buried under monuments that would take pages to describe. Toscanini's monument was simple and unusual. I took pictures of it. Now to a special reception by Mayor Virgilio Ferrari at the Villa Comunale. After a greeting to the symposium group by the Mayor, S. C. C. President Baker replied on behalf of the group. Cocktails and refreshments (a lunch in itself) enabled us to meet more of the members of the Comitato Italiano di Estetica e Cosmetologia, the mayor and others of the official family.

Brushed our teeth and on our way to the famous Certosa di Pavia, an old abbey founded in 1396 where many valuable frescos are beautifully preserved. The abbey is an example of Lombardian architecture. The semi-formal gardens are lovely to look at. The Cistercian monks make and sell various leather articles and an alcoholic cordial.

The Comitato's banquet that night was held at Giannino's on the Via Antonio Sciesa, a place fifty-odd years old which made its reputation on a famous Tuscan bean dish. It has a modern stainless steel and copper kitchen surrounded by green and ivory tiled walls on three sides and glass windows on the fourth side-so the clientele can see what is going on and how it is done. The banquet room was partially wood paneled natural, with an azure tiled fireplace at one end of the room surrounded by cream colored walls. A mammoth chandelier gave a soft glow to the room. Greetings and toasts to the group came from president of the Comitato, Adrian Fayaud, followed by remarks and a poem by Dr. Rovesti, more prose from President Baker and good wishes from President Marriott of the Society of Cosmetic Chemists of Great Britain.

Following a Grande Antipasto came a consommé with tiny "Raviolini," Peti pollo alla Parmigiana, Legumi misti, Torta St. Honore and either kind of coffee. The wines at this banquet were a Bianco Soave and a Chianti Rosso.

Scientific Symposium

Wednesday morning, promptly at 10:00 a.m., Secretary Rovesti opened the Scientific Symposium held in the hall of the Associazione Nazionale Industrie Chimiche. The program consisted of the following papers:

- S. Rivera—"New Derivatives of Hydrogenated Lanolin"
- P. Rovesti-"Masculine Cosmetics"
- V. Facchini—"Experiences on the Use of New Synthetic Hormones in Cosmetics"
- A. Massera—"Skin Action of Phyto-Hormonized Fruit Juices"
- B. Ciocca, P. Rovesti, G. Roccheggiani—"A New Synthetic Amino Acid, Furyl Glycine"
- A. Cocchini—"New Observations on the Action of Antimycotics in Cosmetics"

Following the program and the discussion, I was given an opportunity to personally thank the Comitato for the honorary membership they bestowed on me over a year ago.

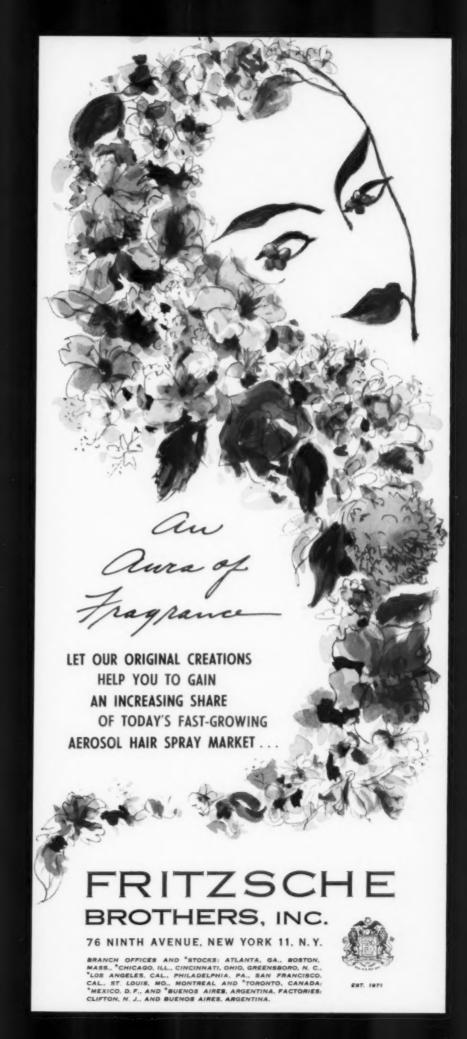
The group had lunch at a nearby restaurant where Martin Kuna and I shared a bottle of Asti Spumonti with our table guests. It is a sparkling white wine resembling champagne.

Visit to Esperis S. A.

At 3:00 p.m. the group arrived for a reception and visit at the house of Esperis, S. A., a manufacturer of cosmetic, perfumery and pharmaceutical raw materials, best known the world over as the original producers of









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Lanocerina, a hydrogenated lanolin, and Hormo-fruits. Sr. Adrian Fayaud greeted us in an outside, shaded plot decorated for the occasion. We then toured the substantial plant grounds and saw some unusual materials like ethyl morrhuate. It was my good fortune to meet Dr. Silvio Rivera, co-inventor of Lanocerina. We chatted about some of the distillation processes, the sealing of vacuum stills, observed a sodium lauryl sulfate paste being made, examined the phyto-hormone rich extracts of various fruits and vegetables and finally I was shown the largest crystals of sodium lauryl sulfate I ever saw. A generous sample was made up for me to take back. Esperis uses the one floor type building for its manufacturing department.

Then to the refreshment tables and a sociable hour. A grateful thanks on behalf of the group from S. C. C. president Baker before Dr. Fayaud presented beautiful

gifts to all the guests as they left.

Our next stop was Durban's on the Via Gulli, a postwar manufacturer of dentifrices and cosmetics. Theirs is a modern building in every way, embellished in the executive end in a way only the Italians can do.

We were introduced to Count Franco Cella di Rivara who extended greetings and good wishes in his native tongue. His lovely daughter, the Countess, translated his words into English. President Baker replied for the tour group. This plant is without exaggeration, the cleanest and brightest manufacturing establishment of finished cosmetics I have ever seen anywhere. The tour of the factory barely started when I met Dr. Corrado Giovanelli, a chemist and perfumer. Shop talk got underway at once. We toured separately making various observations as we moved along ending up in a heavily carpeted chamber where champagne, and cocktails were already being enjoyed. Met more of Durban's people here, but promptly on schedule moved toward the bus that was to take us to Cernobbio on Lake Como. Count Cella bid us buon pomeriggio, handing each lady a gold paper-wrapped package of Durban's toiletries.

We were anxious to get to Lake Como before dark so we could enjoy the sunset. We arrived at Villa d'Este and immediately were ushered to the hotel's private pier to board three chartered boats for a trip on the long lake. Bob Kramer, Host "Vic" Puerari, Dr. Paolo Rovesti, the deNavarres and three others were in a smaller but faster launch. A speedier boat throws more spray—we were all protected but Host Puerari and "Navigator" Kramer. The boatman was raincoated. It was a picturesque trip taking about two hours.

It was a delightful banquet held in the pretty Napoleon Room. Short, very short speeches, thank-yous, and it was the end of our visit to Milan—the Chicago of Italy. The home of the Comitato Italiano di Estetica e Cosmetologia. Everything went smoothly—it was molto

bene!

Thursday morning we took the fast express train on the picturesque route through the Alps and seemingly numberless tunnels to Zurich. The dining car and its service was typical of Swiss efficiency. One meal: aperitif, Ramequin Swiss, Roti de Porc Chasseur, Coffee. We had a bottle of Mont D'or, a Valaisian wine to sharpen the appetite.

At Zurich, some of the group were going to Bonn at 6:00 p.m., while we and a few others left at 9:45 p.m. Eric Vles and we arranged to have dinner at 6:00 p.m. at the Kongresshaus facing Lake Zurich. During the next two hours, my wife and I helped Swiss interna-

tional trade.

Dr. Sophia Plechner and Kurt Weilich were enjoying aperitifs in the garden at the Kongresshaus with Eric Vles when we joined them. Then to dinner and the airport where we met the Kramers, Marriotts and others.

We were on our way to the Bonn-Cologne airport in a DC-7 flight bound for New York. It was less than an hour to Bonn. A quick "nein" to the Customs inspectors' question regarding coffee, spirits and cigarettes. Now came the surprise. Most of the tour stayed at the Sternhotel, but Jeanette and I had reservations at the Konigshof—we thought.

Instead, we were staying at the Petersberg. This is one of the "health" (KUR) hotels—a charming castle-like structure on the top of a mountain on the east side of the Rhine. It looks down into the valley and the busy river. It is \$15 by cab away from the University at Bonn where our seminars were to be held.

International Federation Considered

After a good night's rest, I came down the mountain to the Königshof for luncheon. Here were officers of the Gesellschaft Deutscher Kosmetik-Chemiker (German Society of Cosmetic Chemists), Dr. L. Masch, the president, Dr. H. Neugebauer and Dr. F. Keil, the hardworking secretary. In the side lines found Bobbie Marriott, his Council member, J. B. Wilkinson and Jack Pickthall—all holding the fort for the British S. C. C.

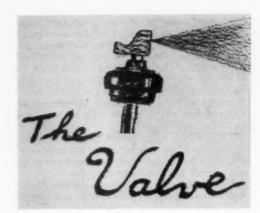
At 2:00 p.m. the meeting to consider International Federation got underway. Erik Thomsen and Connie Steffensen of the S. C. C. of Denmark were on deck with Gui Dony and G. Dumont of Belgium, Drs. R. Severyns and P. Velon along with L. Schmuck represented French interests; dermatologist, Dr. R. Brun and Kurt Pfeiffer represented the Swiss. Then there were special guests just organizing Societies of Cosmetic Chemists, Mr. and Mrs. C. S. Gregory (Spain); Ake Gillners and Torsten Sedenbert (Sweden); Bjarne Borud (Norway); Jack Quigg (Canada) and of course, Drs. Masch, Neugebauer and Everts of the German Society; Jim Baker, Bob Kramer, Sab Striance and I

upheld the U.S. front.

After this meeting at which great progress was made, the German Society gave a cocktail party and reception open to all guests and members. Among the people I met, either for the first time or again, were the Heilingotters (Wella) whom I hadn't seen since Holland two years ago; Rubinstein's Dr. Hugo Salfeld, who tells me I don't know the difference between a gourmet and a gourmand (my dictionary says a gourmand is gluttonous and fond of luxurious food, while a gourmet is an epicure, a connoisseur in eating and drinking). I still think friend, Salfeld is a gourmet. "Hank" Van Ameringen caught up with us in Bonn; he too was living at the Petersberg. Polak Frutal Works' Dr. J. Jellinek and Eric Vles were on hand. Helene Curtis' Joseph Jordan, whom I last saw in Paris the year before, was present with his wife. Herbert Janowitz, one of Israel's cosmetic manufacturers (Manon) and wife were in the group. Polak & Schwarz's Dr. P. Witjens and Irmgard Freiberger; Hugo Janistyn and wife; Grunau's Hans Keller (whom I later met at the Brussels Fair); contemporary, Dr. T. Kunzmann who publishes Seifen, Ole, Fette. Wachse, Goldschmidt's Albert Engelhard, Schwarzkopf's Dr. G. Erlemann; Dehydag's Dr. Gustav Leitz; Dragoco's Dr. H. K. Thomas and G. A. Nowak; Kleinol's Siegfried Preisinger; 4711's Dr. Hans Schmitt, not to mention Dr. Pierre Velon (Lancôme); Perfumery and Essential Oil Record's W. R. Littlejohn; Dr. Raolo Rovesti; S. Sabetay (Lasserson & Sabetay); Naarden's A. H. Ruys, Givaudan's Rochus Classen, Hoffmann-La Roche's Dr. Woldemar Geux, Dr. Nadja Avalle (Arval Laboratories) and the host of Yankees who all came over from the Sternhotel a couple of blocks away. Olive Pickthall, Doris Quigg and my wife Jeanette, appeared suddenly to start a round of introductions and hellos to old acquaintances. The reception was a grosser erfolg.



An important step is a special stress-cracking test, to which all mating or joined plastic components are subjected. The joined components are tested in an especially strong chemical test solution for specified periods to simulate the corrosive effects of various oils and chemicals found in aerosol formulations. The young woman in this photograph is about to place a sample lot of actuators into an oven for an accelerated test.



Perfume and Cologne

LETITIA CUNNINGHAM

Every time two women purchase colognes and toilet waters, one of them specifies, "The aerosol package, please.

Out of \$65,170,000 worth of colognes and toilet waters sold in 1957, nearly half were packaged in aerosol

form. The percentage increases monthly. While overall fragrance sales have gained in volume only slightly, and in fact have failed to keep pace with the growth of the potential market, sales of aerosolpackaged fragrances have zoomed. In 1957 more than 17 million units were sold, twice the 1956 volume. This year, the trend is continuing, according to Donald S. Tuttle, Jr., sales manager of the Valve Division, Risdon Manufacturing Co., Naugatuck, Conn.

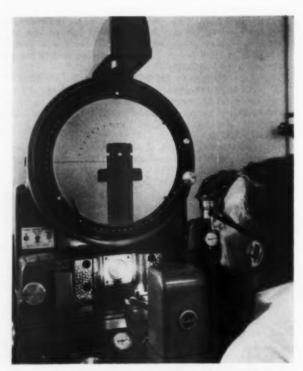
Yet, only a few short years ago, aerosol-packaged fragrances were unheard of.

What accounts for the dynamic growth of aerosol colognes and perfumes? The answer is short and simple: Women like them.

According to the DuPont survey, the primary reason women favor aerosol fragrances is ease of application. Other important factors are:

Aerosol-packaged fragrances retain their original true scent for the entire life of the package. No matter how long the package is in use, there is no danger of evaporation or deterioration. Aerosol fragrances, when applied, last longer than fragrances dispensed in the ordinary way because the tiny droplets penetrate the skin. The aerosol spray is uniformly fine. Finally, aerosol-packaged fragrances can be carried in luggage or handbags without fear of spilling or leaky caps.

In order to bring about this growing demand and acceptance for aerosol fragrances, three obstacles had to be overcome. First of all, formulations that retain the accustomed, accepted scent of the cologne or perfume were necessary. Secondly, attractive containers had to be designed both for on-dresser use and as handbag accessories. Finally, special purpose valves had to be



A standard deviation test on a highly sensitive control Projector. Hair-thin tolerances and minuteness of the components leave no margin for error in the manufacture of valves. The projector, accurate to one-half of a thousandth of an inch and capable of enlarging the image of each component to 100 (or 300) times its normal size, detects even the slightest variations in width, depth, length, radius and other dimensions. Here the important valve core, a nylon component, is checked.

Formulations that retain the accepted scent, attractive containers and special purpose valves to dispense a wide fine spray are essential . . . How such valves are made



The quality control system at Risdon begins with the individual component and ends only when the assembled valves are packaged for shipment to fillers and manufacturers.

ne AEROSOLS

developed to dispense a wide, fine spray and, in the case of perfumes, a measured amount of spray.

These objectives having been reached, the goal today is to maintain the high standard of performance in every aerosol package that reaches the consumer.

Since the valve is the operating mechanism or "motor" of the aerosol package, its efficient functioning is essential to the working of the entire package. To insure optimum performance, many valve manufacturers subject their output of valves to to quality control tests as rigid as those used in the most technical industries. As the "push-button" which operates the valve and determines to some extent the way the product is dispensed, the valve actuator receives particular attention.

One such manufacturer is Risdon, pioneer developer of valves for glass bottles and which now makes a substantial number of the valves used in aerosol cologne packages. Among its products is the micro-mist valve and actuator, which mechanically breaks up the aerosol spray into a lace-like mist, and is credited with doing much to popularize aerosol colognes.

The company's quality control program begins as soon as component parts are received at the factory, and continues until assembled valves are shipped to the contract filler or fragrance manufacturer.

The tests must be precise since permitted tolerances are hair-thin, and many of the components are as minute as a baby's fingernail. Regular testing procedures cover dimensions, finish, physical properties and mechanical operation of components and completed assemblies.

One of the most vital tests for actuators destined to be a part of an aerosol cologne package is a spray-test conducted in a specially designed booth. Here assembled micro-mist actuators are checked to determine if the spray is emitted in the desired wide-cone pattern. Water under pressure, simulating the actual pressure of an aerosol-packaged product, is sprayed through the actuator against a "target," which indicates whether the proper degree of spray fineness has been achieved.



Therough testing of assemblies and components to determine how valves will react in actual use is essential. On the left the inspector uses a hydraulic tester to simulate pressure filling conditions. Valve assemblies must remain intact even though subject to hundreds of pounds more pressure than actually experienced in use. To be sure that the orifice of each valve's actuator is unobstructed, the technician on the right uses a monemeter to gauge the air flow through the opening.

Samples of all plastic, rubber and metal components undergo a series of tests before they are placed on the assembly line. Conformity to size specifications is checked on a highly sensitive contour projector. Some important parts, such as the stainless steel inserts in the mechanical breakup actuator, are checked under microscopes. To determine whether they can withstand cracking under the corrosive stress of oils and chemicals, mated or joined plastic components are submerged in a strong chemical solution.

Not only are samples of all components checked before assembly begins, but inspectors are stationed along the assembly line to spot check work in progress. Inventory is also checked regularly.

Since the slightest bit of foreign matter can cause malfunction in the intricate, minute valve, special precautions are taken to keep the assembly area free from dust. Before assembly begins, components are cleaned





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Two different tests are being conducted side by side, under the watchful eye of Harold Wright, quality engineer. On the left, actuators are being closely examined under the microscope to detect weldmarks, pock marks or other surface conditions that could cause faulty valve performance. On the right, size of one of the tiny orifices in the Micro Mist actuator is checked with a pin gauge. The orifice should measure only 25/1000 of an inch in diameter.



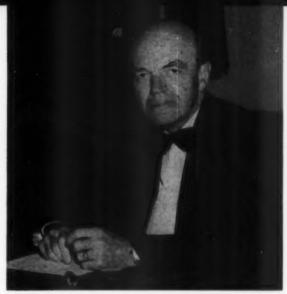
After the Micro-Mist actuators have been assembled, they are put through a spot check in a specially-designed spray-testing booth. Water under pressure, to simulate the actual pressure of an aerosol product, is sprayed against a marked target to show whether the spray is too concentrated or too wide. The faulty actuator on the left emits a single, concentrated stream of water.

and shaken. After every shift the assembly area is vacuumed. Gauges and tools are inspected, cleaned and oiled at least once a week.

To minimize further the possibility of foreign matter clogging the completed valves, they are packaged and shipped in airtight plastic bags.

In the course of operating this rigid quality control program, which is based on government standards set up for other exacting fields of manufacturing. Risdon has rejected more than a million and a quarter component parts. As even more fragrances, including costly imported perfumes, are packaged in aerosol dispensers, quality control procedures at companies that produce specialty valves will become even more stringent and accurate.

Total sales of cosmetics in this depression-proof industry are up but the share of the department stores and specialty shops is declining. Effect of the supermarket and house-to-house salesmen



The Sage of the Toilet Goods Industry

Changing Picture in Consumer Buying

S. L. MAYHAM*

hose of you who read Time Magazine for June 1958 may perhaps remember that the cover of the magazine said, in effect, that cosmetics were a depression-proof industry. That is an actual fact. Even during the time of the great depression in the early thirties, our retail sales fell off for only approximately three years, and they didn't fall off very sharply then. As early as 1933, we were on our way back and since that time the industry has increased its retail sales fourfold. I doubt if there is any other industry in the country, except perhaps some new one which started from scratch after the depression, which can show anything approaching that mark. In this so-called "recession" which, according to one group of politicians, is over, and according to even the most pessimistic group has reached its bottom, our sales steadily increased at retail. For example January sales in 1958 were about 61/2% ahead of those in 1957; February was up $3\frac{1}{2}\%$; March was up 10%; April, which, according to the economists was the low point of this "recession," showed a retail sales gain of 3%; May was up $5\frac{1}{2}\%$; and June was up $4\frac{1}{2}\%$.

Why is the Industry Depression Proof?

Now, what is the reason for the toilet goods industry to be substantially depression-proof? There are a great many reasons. I think, principally, one is a morale factor. At a time when perhaps the head of the house is feeling pretty low because he is afraid of losing his job, or his business is going to the dogs, his wife is more inclined to pep herself up a bit by perhaps putting on

*Executive vice president, Teilet Goods Assn. Abstracted from an address before toilet goods buyers and merchandise managers at the Frederick Afkins Inc. buying offices, September 23.

Sparks from Mr. Mayham's Anvil

The cosmetic industry is substantially depression-proof.

While manufacturers sales in general have not declined from the high levels of 1957 they have not increased or if they have it has been at a much slower rate than retail sales.

During the period when supermarket cosmetic sales increased from about 6% of total sales to more than 20%, the sales of cosmetics in department stores and specialty shops declined from 27% of the total to just about the same as that of the supermarkets. This does not mean that department stores are doing less business than they did in 1950—they are doing more but proportionately they have not been holding up their end—neither are the druggists.

Full treatment lines and products intimately connected with style and fashion will always be sought in department stores. They cannot be sold readily in supermarkets unless there is a profound change in the supermarket method of operation—somebody has to talk to women about these things.

There is no substitute for personalized selling. The average cosmetic sales ticket of the house-to-house salesman is near \$11. The average cosmetic sales ticket of the department store is about \$2.67 and the average cosmetic sales ticket in the retail drug store is about 69 cents.



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her lipstick before breakfast and dolling herself up when the weary old man comes home, than she would be in more normal times. Another factor which works during a real "depression," but is perhaps not so important in a "recession" is that in those times more women feel a necessity of adding to the family income by getting themselves jobs. The business woman and even the woman in the shop who comes into contact with more people than she would normally, feels that she must look better; that appearance-wise she must be in a competitive position, and accordingly she uses and buys more such things as lipstick, powder and even the more basic necessities such as creams, shampoos and dentifices.

While the retail trade has steadily increased in volume over the record year of 1957, many manufacturers have found that things were not quite so good. Buying from the manufacturers has been distinctly slower than has been buying by the public at your retail counters. Word is going out, not only in your type of stores, but in most of the other outlets, that inventories have to be slashed; that your department cannot splurge; and that maybe this is not the time to experiment with new lines and new products. The result has been that while manufacturers' sales in general have not declined from the high levels of 1957, they probably have not increased, or, if they have, it has been at a much slower rate than retail sales.

Why Supermarket Sales Rose

Why is it that during the period when supermarket sales increased from about 6% of total sales to a level of more than 20%, the sales in department stores and specialty shops declined from 27% of the total to a level just about the same as that of the supermarket? This does not mean that you are definitely doing more—but it does mean that proportionately, you have not been holding up your end (and, incidentally, neither has the druggist). There are probably a good many basic reasons for this. One might be the change in shopping habits. One might be the difficulty in securing parking space. But there are probably quite a few more intimate reasons than just the change in buying habits, and the difficulty of getting around in automobiles in the city.

Importance of Inventories

It may be the status of your inventories which has something to do with it. You cannot sell something that you don't have, and, if because of your own fault or the fault of the big shot upstairs who tells you not to spend any more money, you find yourself out of the day-to-day staples which a woman wants, needs, and asks for, you must inevitably lose some business. You probably lose more that way than does the druggist who seldom attempts to make a companion sale. In other words, if a woman goes to the drugstore and asks for a certain kind of lipstick and he doesn't have it, he has lost a sale of perhaps a dollar-and-a-quarter. If you don't have it, you have lost a sale of not only a dollar and-a-quarter lipstick, but the three dollars in other merchandise which your salesgirl, being well-trained and intelligent, could have tied to the initial sale without too much trouble. So I urge you not to contribute to the changing buying habit by being out of something which a woman can easily pick up and put in a shopping cart, and thereby develop the custom of purchasing them in outlets other than yours.

Push Specialty Items

I don't expect that the department store will ever consider the supermarket to be a serious competitor on a great many items. Full treatment lines or items intimately connected with style and fashion will always be sought in your stores, and they cannot be sold readily in supermarkets unless there is a profound change in the supermarket method of operation. Somebody has to talk to the women about these things. Women expect it and demand it, and yours is the ideal outlet for this explanatory talk (call it demonstration if you like). However, almost the entire emphasis in this change of trend in distribution—and the manufacturers contribute to this to a very large extent—is to launch, push, and promote what might be called "specialty items." Years ago, for example, the lipstick was not a "specialty item." It definitely is today. The same goes for many other articles.

Let us turn to an item which your type of store has never sold very heavily. You have never done a tremendous business in dentifrices. They were, generally, drug store items, and it is not too long ago when the retail druggist probably did 75% of the dentifrice business. Right now, the supermarket is doing 60% of it, and possibly more. At the time when general sales of toilet preparations, which means everything from perfumes to the strict utility dentifrices, were up 8.3% in 1957 over 1956, sales of dentifrices were up more than 13%. The reason is obvious and it applies not only to dentifrices, but other specialty products, such as shampoos. The manufacturers have pushed these specialties advertising and promotion-wise to the point where what was considered virtually a saturation mark, has increased much faster than the over-all market. As this trend to promotion of specialty items increased and as more and more items become specialties-which is going on all the time-you can expect more of this trend and it may take more business away from your type of store.

Not knowing how to run a store or a department in one, I cannot tell you whether you can sell these things or not. Experiments with self-service, open displays and other things which make for supermarket sales, have been tried by various department stores. The best reports that I could get are to the effect that while these experiments have resulted in some business, they cannot, by any stretch of the imagination, be called a conspicuous success. Having observed shoppers in department stores as against those in drugstores and supermarkets, I can understand that there may be a good reason for that. I doubt very much whether your average customer shops in your store with the same mental attitude and background that she uses when she pushes the supermarket cart.

A Fine Way to go Broke

But there is another thing which I can see and which worries me a great deal more than the fact that your stores are not getting your share of the "specialty item" business. I think I see a tremendous tendency on the part of the department store buyer to lose control of his or her own department. This is partly the fault of the manufacturer, partly the fault of store top management, and, perhaps to a lesser degree, your own fault. There seems to be a tendency to look upon allowances by the manufacturer for promotional purposes as being a substitute for the proper operation of the department, and to me this definitely should not be the case. Let us take the example of cooperative advertising. I don't have to tell you that this has been tremendously abused by the stores with the consent and sometimes the connivance of the manufacturer himself. It has reached a point where the word 'cooperative' would seem to be somewhat of a misnomer in referring to manufacturers' advertising appearing over the store name. It is no secret that many manufacturers are paying 100%—which in my book is not really cooperative at all; nor is it any secret that some stores are demanding not only 100% of the local rate, but even in extreme cases, 100% of the national rate plus a service charge. Why any manufacturer goes for this I'll never understand, especially in view of the provisions of the Robinson-Patman Act which compel him to extend percentage-wise on his sales similar allowances to all of his customers competing in that particular trading area. If you were manufactures, I'd tell you, "this is a fine way to go broke."

Now, what does the manufacturer think he is getting for this? The store, of course, is getting an allowance. The manufacturer in many cases is perhaps getting a preferred position in the department to which his sales and possibly his general reputation would not normally entitle him. When you put the high allowance-low sale line in the preferred position and relegate the low allowance-high demand product to an inferior position, I say you are not acting the part of good merchants. And yet that is what I hear about and see all of the time.

Too Many Deals

I spoke before about allowing your supply inventories to decline and placed the blame, as you will recall, not entirely on you, but upon top management and to a certain extent upon the manufacturer. One of the reasons for this lack of emphasis on fast sellers is probably the deal. Here I would say the manufacturer and you are jointly at fault. The manufacturers have been and still are putting out far too many deals. One or two deals a year are one thing; but a constant procession of deals the year round is quite another. I know many of you dislike these deals. So do the druggists, and so does everybody else attempting to sell toilet goods at retail. I don't have to tell you what happens to many of them, but I think I should tell you that when you tie up your limited budget in deals, which maybe you think you must have because the store down the street has them, you are not only losing sales on staples which you don't have, but you are, what is far worse, driving customers out of your stores and into the hands, not of other department stores because they are in just as bad a position as you, but to the other types of outlets which profit by this error.

May I urge you not to chase customers out because you are out of stock on staples, and not to chase customers out because high allowance resources are given positions in a department to which they are not entitled.

According to my information, your departments, on the average, do about 2.9% of the total business of your stores. Almost no department is more important from the standpoint of percentage of total sales. From the standpoint of consistent steady profitable operation, your department is (maybe next to corsets) the best department the store has. That has led to top management in the stores to take your department for granted. The big boss upstairs looks at the comptroller's statement and says "This cosmetic department is alright. I can forget it . . ." Thanks to you, the department runs itself, (perhaps not too well) but it does run itself quite profitably, and as a result, top management does not realize that you also have your problems, nor does it attempt to help you solve those problems as I am told it does in the case of some other departments, not so good in volume and definitely poorer in profit. So when the comptroller issues his "cut down buying order," you get



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it first and hardest and you have the least opportunity to argue about it. I know that a storewide cut-down buying order is not an unusual thing, but I know also that the department which has been flopping around in volume and showing perhaps not too good a profit picture at the same time, is likely to be able to argue us way out of this order better than you.

"The wheel that squeaks gets the most grease." Maybe you don't make enough noise upstairs.

No Substitute for Personalized Selling

I firmly believe that there is no substitute for personalized selling. It seems to a certain extent to have gone out of fashion in American retail circles recently. I am not going to go into the many, many reasons why this unfortunate tendency has taken hold of the psychology of the retail merchant. But there is no place like the department store unless it be the house-to-house operation where personalized selling has such a peculiarly strong place. As I have said, many items cannot be sold in any other way. I urge you not to let this tremendous advantage which you have over many types of outlets escape. When a woman comes into your store and asks for something which you ought to have, don't let her walk out without giving your salesgirls an opportunity to sell her not only that item, but a lot of others at the same time.

Just to show you the advantage of personalized selling, may I point out that perhaps the best opportunity for that type of salesmanship in our field lies with the house-to-house sales person. As near as I can figure out, the average sales ticket of the house-to-house sales person, is somewhere near \$11.00. The average sales ticket in your type of store is, I believe, about \$2.67. The average sales ticket in the retail drugstore is about .69¢. You see, the average druggist is not a merchant and he knows very little about personalized selling. But in order to do personalized selling, you have to be equipped with the stocks and with the department which will attract the woman who is ready for that type of sales effort.

Painful Business

t is painful business—the do or die battle which is being waged by the large department stores versus the discount houses. List prices are ignored and many products are sold at less than replacement cost. Clerks have been eliminated to a substantial degree and free delivery of purchases has disappeared. Personal selling no longer exists and in its place is the equivalent of self service. But even so the overhead of discount houses has risen from 11 to 15%. This the New York Times reports. True to predictions cut price wars and the elimination of fair trade leads to deterioration of stature of brand or trade marked products, loss of jobs, loss of selling incentives, loss of profits and a slow down of the production line with the loss of additional jobs all because merchants have no interest in selling goods that are unprofitable, the NWDA Executive Newsletter points out. A dear price to pay for a bargain. Price wars which have followed the abandonment of Fair Trade may be building plenty of business for the big stores and they are certainly giving consumers a chance to grab some bargains but the wars are also dooming small retailers the nation over. Is the consumer really receiving a bargain? From a short term point of view the effect of deep price cutting is the elimination of the small store. The profit motive is the incentive of business. When that is destroyed that store has no place to go.



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FLAVOMATICS FROM FAT

JAMES J. BRODERICK*

In all probability, fats are originally derived from more simple compounds, such as glucose and other sugars but, as commonly found in plants, are mixtures of glycerides (predominantly tri, infrequently containing traces of mono or diglycerides). These are simply expressed as:

As a general rule the natural occurring fatty acids have an even number of carbon atoms in a straight chain, the vast majority belonging to the C_{16} - C_{18} series and are saturated or contain one or more double bonds.

Fats are hydrolyzed to free fatty acids and glycerine by lipase enzymes or by acid or alkali under proper conditions. Since most fatty acids of a higher chain length than 10-12 carbons have little or no flavor value, triglycerides containing only fatty acids of long chain lengths release no flavomatics unless additional changes take place.

These fats containing low molecular weight fatty acids in their triglycerides that are important flavorwise are milk or butter fat and coconut oil. A typical analysis of the fatty acids found in milk fat¹ follows:

Fig. 1-Fatty Acids in Milk Fat

3.0%	Butyric	1.3%	Arachidic (as)
1.4%	Caproic	0.3%	Decenoic
	Caprylic	0.4%	Dodecenoic
2.7%	Capric	1.6%	Tetradecenoic
3.7%	Lauric	4.0%	Hexadecanoic
12.1%	Myristic	29.6%	Oleic
25.3%	Palmitic	3.6%	Octadecadienoic
9.2%	Stearic	0.3%	Arachidonic (as)

The release of fatty acids from milk fat is an important factor in the flavor of butter, ghee, cheese, yogurt,

etc., but in all probability the importance of these free fatty acids has been exaggerated by the flavorist rather than overlooked. As a matter of fact butterscotch and cheese, as representative of a group of flavor types depending on butter fat to some extent for flavor, derive most of their flavor from protein and carbohydrate breakdown products.

Except in relatively few instances, flavor contribution by fatty acids, other than those of low molecular weight, is only possible when additional reactions or decomposition takes place. Coconut, another fat whose fatty acids derived from lower molecular weight triglycerides contribute to the total flavor, serves to demonstrate some of the additional reactions that can take place to give flavor. The fatty acid composition of coconut oil has been given? as:

Fig. 2-Fatty Acids in Coconut

0.5%	Caproic
8.0%	Caprylic
7.0%	Capric
48.0%	Lauric
17.0%	Myristic
9.0%	Palmitic
2.0%	Stearic
6.0%	Oleic
0.2%	Palmitoleic
2.0%	Linoleic

Under the action of lipase or the influence of sunlight during drying, free fatty acids are released. In addition to free fatty acids, the essential oil of coconut has been reported³ as containing:

	methyl	n—heptyl ketone
	methyl	n-nonyl ketone
d-	-methyl	n-heptyl carbino
	methyl	n-undecyl ketone
d-	-methyl	n-nonyl carbinol

Beta Oxidation and Ketone Formation

On the basis of numerous experiments it has been proven that enzyme systems exist in both plant and animal cells which are capable of oxidizing the beta CH_o group of a fatty acid into a beta CHOH group,

*Research Center, Lever Bres. Co.

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"PRESERVATION and ANTIOXIDANTS" will appear in two installments; in the January and February issues. In all, it will run into at least 12 chapters, each devoted to some particular phase; will include graphs, tables, charts, formulas, procedures, equipment, materials, etc.; and will be in demand as a basic guide and reference.

PART 1 JANUARY '59 ISSUE
" 2 FEBRUARY '59 ISSUE

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SYMBOL OF "IN-DEPTH" EDITORIAL COVERAGE

a beta C=O group or a COOH group. This is known as beta oxidation.

The distinctive flavor of blue cheese^{5.6} and other cheeses in the same class is due, at least in part, to methyl ketones formed from the oxidation of fatty acids. A number of methyl ketones have been reported in this type cheese and one author⁵ recommended a 1 to 20 ratio of methylamyl ketone to butyric acid to develop a blue cheese flavor.

Flavor chemists have used the ethyl esters of pelargonic and related acids to give the estery quality to cheese flavors undoubtedly supplied naturally at least in part by methyl ketones. A comparison of the methyl ketones found naturally with ethyl esters used by the flavorist show a reasonable resemblance in odor and flavor. Therefore, whenever fats are a source of flavor and a fruitty ester character is apparent, methyl ketones should be considered as a possibility.

Delta Lactone in Milk

In the development of a synthetic coconut flavor the flavorist not only considers the aliphatic acids present in coconut fat and the methyl ketones possible from their oxidation but would rely rather heavily on certain lactones. Therefore, the disclosure that delta decalactone was responsible for the sunlight off-flavor in milk powder was received with interest by the flavorist. The similarity of fatty acid composition in milk and coconut and the exposure of coconut to sunlight made the presence of delta decalactone seem logical. Its presence in natural coconut needs verification however.

Other authors conjectured on the possibility of hydroxy fatty acids in milk fat that would lactonize to form deltalactones, and those interested are referred to the original article⁸.

Omega Oxidation in Animal Organisms

In addition to beta oxidation, omega oxidation or the methyl oxidation of the paraffin end of the fatty acid molecule (CH₃-R-COOH—COOH-R-COOH) takes place

in the animal organism but is not a general catabolic mechanism for fatty acids. Investigators estimate that 90% of a given acid of specific chain length (generally medium chain lengths) undergoes beta oxidation while 10% undergoes omega oxidation. Although omega oxidation has little significance in the breakdown of fatty acids by animals, it is probably partly responsible for some of the most important natural perfume materials—which are also of some importance in flavor development.

For example, some classic work has been performed by Erickson and Hix⁹ on the fatty acids derived from the scent glands of the Louisiana Muskrat and by Stevens¹⁰ on the presentation of the biological origin of animal musk. The following scheme was presented for the formation, in the animal, of musk like ketones:

It was pointed out by Stevens that the first step in omega oxidation is probably the formation of a primary alcohol which is then oxidized through the aldehyde to the acid. The occurrence of ω-hydroxy pentadecanoic acid, juniperic and ambrettolic acids in certain plants and aleuritic acid in shellac was pointed out as being consistent with this hypothesis. While the carbinols (present in the muskrat) could arise from the reduction of ketones, it seemed more logical to the author (Stevens) because of the quantity present (98% carbinols or carbinol esters), that the carbinols were formed first. This could occur by decarboxylation of the \$\beta\$ hydroxy acid intermediate as indicated above. The occurrence of civetol with civetone was explained in this manner. Stevens pointed out that Ruzicka's work on muscone did not show the presence of muscol and therefore a somewhat revised mechanism, that did not provide for prior carbinol formation, was given for muscone formation.

h

A comparison of fatty acid composition given by two authors. and the macrocyclic ketone content of the muskrat is given in Fig. 3. In the biological scheme proposed for macrocyclic ketone formation one carbon atom is lost through CO₂ release. The presence of ketones in muskrat with one carbon less than the corresponding fatty acid and in the same general ratio as the fatty acid content lends strength to this hypothesis. It would seem reasonable that this general theory of musk odor origin could be extended to some of the other musk producing species.

	% Fatty Acid		Figure 3			% Macrocyclic	
Total R	odent Fat Stevens	Sat.	Erickson & Unsat.	Hix Di Unsat.	ketor	Stevens	
C-10	0.3	0.2			C-9	-	
C-12	0.7	0.3	0.3		C-11	_	
C-14	8.1	6.8	0.2		C-13	1.0	
C-16	29.9	23.1	8.1		C-15	40.0	
C-18	59.3	0.2	24.2	5.4	C-17	58.0	
C-20	1.5				C-19	0.7	
C-22	0.2				C-21		
C-24		0.2	1.4	3.1	C-23	-	
C-26			3.0	1.0			

Other Oxidative End Products

Of greater importance to the flavorist are some of the other oxidative processes that occur to fatty acids resulting in flavomatics of value. As a starting point we might observe the widespread occurrence of hexenal, hexenol and its esters in relatively important natural flavors. Some have already been identified in apple, strawberry, grape, raspberry, etc., and each new investigation into flavor composition seems to lengthen the list of products containing hexenal or its homologs. Some of the earlier investigators11 of 2-hexenal in plant leaves proposed its formation from an unsaturated fatty acid by the action of an oxidase system. The work on strawberry12 showed that 2-hexenal is formed only after the strawberries are pureed. Its formation requires the presence of oxygen and seemed to have been enzymatic in nature.

The elegant work done on vegetable oil reversion proved to be an aid in understanding the formation of these unsaturated aldehydes and their related compounds. In an attempt to determine the cause of off flavor in sovbean oil13 heptenal was isolated and identified. It was suggested that the precursor to the heptenal was a conjugated triene acid which could result from the isomerization of linolenic acid. Other investigators pointed out that in the autoxidation of vegetable oils (which are substantially enzyme free) the first products formed from linoleic acid are hydroperoxides. The decomposition products of the peroxides, on fission, consist in part of α, β unsaturated carbonyl compounds. Suggested mechanisms were given and interested readers are referred to the original article14. The aldehyde, 2-undecenal, and some homologs were also isolated from oxidized vegetable oil. Aldehydes of the type under discussion readily undergo oxidation, reduction, and isomerization, thus making it possible to account for a number of similar type end products from one original precursor.

From cottonseed oil 2,4 decadenial, 2 octenal and hexanal have been isolated¹⁵. It was concluded that the aldehydes resulted from the decomposition of the isomeric hydroperoxides of linoleic acid, the principal fatty acid of cottonseed oil.

It is a well known fact that linolenic acid is much more susceptible to oxidation than linoleic acid. More recently is it has been concluded that linolenic acid is the unstable precursor of the "fishy-painty-grassy-

melony" flavors in soybean oil. Since hexanal has been shown to be derived from linoleic acid, it would seem logical that 3-hexenal would, in a similar manner, be an end product of the fission of the more labile linolenic acid. The relationship of hexanal, 2-hexenal and 3-hexenal to linoleic, isomeric linolenic acid and linolenic acid and linolenic acid respectively can be seen in the following structures:

$CH_{2}(CH_{2})_{4}CH = CHCH_{2}CH = CH(CH_{2})_{7}COOH$	linoleic acid
CH ₃ (CH ₂) ₄ CHO	hexanal
$\mathtt{CH_3CH_2CH_2CH} = \mathtt{CHCH} = \mathtt{CHCH_2CH} = \mathtt{CH(CH_3)_2COOH}$	conjugated linolenic acid isomer
$CH_{3}CH_{2}CH_{2}CH = CHCHO$	2-hexanal
$CH_2CH_2CH = CHCH_2CH = CHCH_2CH = CH(CH_2),COOH$	linolenie acid
CH CH CH - CHCH CHO	3-hevanal

In the autoxidation of the unsaturated fatty acids a hydroperoxide formation initially takes place and therefore there are a number of isomers as possible end products. These are probably mixed aldehydes equal to the length of the chain before the unsaturation (that is attacked) and of one carbon more or less. Enzymatic action may give a less complex mixture of end products for aldehydes of the same chain length are more often identified in natural products. In looking for a clue as to the mechanism of formation, the frequent presence of the corresponding alcohol in natural products may be considered.

It has been pointed out by investigators17 that in many plants the aerobic oxidation of ascorbic acid is catalyzed by a copper-protein complex or ascorbic acid oxidase. Among the plants mentioned were apples, bananas and cucumbers. Other workers18 have found that the oxidation of ascorbic acid by molecular oxygen is catalyzed with remarkable activity by copper ion and that appreciable amounts of hydrogen peroxide accumulate during the reaction. More recently19 it has been found that this reaction is responsible for the breakdown of anthocyanin pigment in strawberries. Thus we have in strawberries and many other plants possible conditions for the enzymatic breakdown of unsaturated fatty acids to shorter chain unsaturated alcohols and then to ester and aldehyde formation. For example, hexyl alcohol could be formed from linoleic acid, 2-hexanol from the isomer of linolanic acid and 3-hexenol from linolenic acid. Linolenic acid is particularly widespread in plants, especially in the

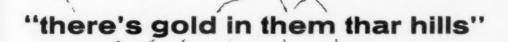
Speculation on Possible End Products

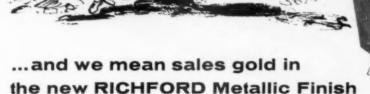
Although enzymes are often quite specific, the type system present in strawberries and the presence of 2,6 nonadienal and its alcohol in violet leaf²⁰ and cucumber²¹ could easily indicate that a similar fission takes place at the unsaturation between the 9,10 carbons giving one or more isomers of a doubly unsaturated nine carbon alcohol or aldehyde, or both, in the case of linolenic acid.

 $\begin{array}{l} \mathrm{CH_3CH_2CH} \! = \! \mathrm{CHCH_2CH} \! = \! \mathrm{CHCH_2CH} \! = \! \mathrm{CH} \left(\mathrm{CH_2} \right)_7 \! \mathrm{COOH} \\ \mathrm{linolenic} \ \mathrm{acid} \\ \mathrm{CH_3CH_2CH} \! = \! \mathrm{CHCH_2CH} \! = \! \mathrm{CHCH_2CH_2CH_2CH_2(H2O_2)OH} \end{array}$

2,6 Nonadien-1-01 (violet leaf or cucumber alcohol)

It is interesting to note that, as previously mentioned, apples, bananas and cucumbers, as well as strawberries, show the catalytic oxidation of ascorbic acid and hydrogen peroxide formation. In addition to the flavor components of cucumber mentioned above, 2-hexenal has been identified in apple²² and strawberry¹² and 2-hexenol and hexenyl acetate has been found in strawberry oil²³. We have pointed out in an



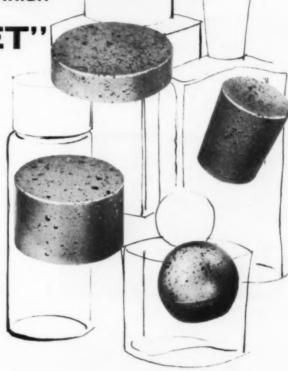


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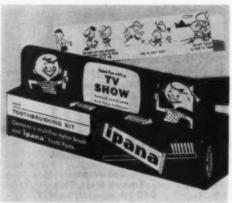


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Showrooms: Empire State Bldg., 350 5th Ave., N. Y., N. Y.







PARFUMS CIRO-1

Parfums Ciro introduces Flaconettes, a colorful set box containing five ½ dram bottles of perfume in Surrender, Reflexions, Danger, Ricochet and New Horizons. Flaconettes is a unique way of sampling the Ciro fragrances and gives a consumer an opportunity to acquire a collection of five famous Ciro perfumes at a special introductory price of \$2.00

BRISTOL-MYERS-2

Bristol-Myers Educational Service Department has developed a tooth-brushing kit for distribution to schools, dentist, hospitals, camps and civic groups at below-cost price. The carton of the newly-designed kit, containing a toothbrush and tube of Ipana tooth paste, includes a back panel TV "screen". The ten-picture comic strip, that can be hand colored and pulled through it, dramatizes reason for dental health.

ANDREW JERGENS CO .- 3

A new Christmas package known as the Woodbury Bubbling Bath Oil, in two fragrances, has been introduced nationally by the Andrew Jergens Co. The scents are Fragrant Pine and Apple Blossom. The bath oil is packaged in 16-ounce, tall, round bottles, decorated in white and aqua. The color of the product shows through the glass to complete the packaging decor.

MARY CHESS INC .-- 4

Chivalry, the new men's line of Mary Chess, features distinctive masculine packaging. Black bottles flecked with gold, decorated with a gold shield on the face and topped with a gold cap contain Black Knight while similar white





3.

4.

bottles contain White Knight. Sets of three products rest in a black or white leather box. Other sets contain combinations of two of the products; White Knight in a white leather box lined with blue velvet: Black Knight in a black leather box lined with red velvet. These boxes have a center compartment for studs, cuff links and other iewelry.

LUCKY TIGER CO .-- 5

A new private mold container and a new label are being used by the Lucky Tiger Manufacturing Co. for the packaging of a line of Lucky Tiger hair products. The company is also featuring a white kraft shipping container and new corrugated box printing. The package now in distribution is a four-ounce container. Plans include the later introduction of a seven-ounce item.

HAZEL BISHOP INC .-- 6

The Ultra-Matic compact, a golden metal refillable case for pressed powder with a click-in, click-out feature, has been introduced by Hazel Bishop, Inc. By pressing a tiny round button on the compact's base, the user may switch makup color for day or evening, or replace the pressed powder when used up. The refill is packaged in a tortoise lucite case which may be used as a compact in itself or removed and inserted into the dressier Ultra-Matic. There are three different compact designs.

CHANEL INC .-- 7

Chanel, Inc. has a new aerosol container designed to deliver 800 sprays of Chanel No. 5 Cologne. The new container, produced by Scovill Manufacturing Co., was designed by Chanel as a companion to Chanel's "For the Purse" perfume container. The cap and body are polished black anodized aluminum, with Chanel's trademark on a polished brass insert in the top of the cap. The wide center band is also polished brass. When the cap is removed and the black activator cap is pressed, a predetermined amount of Chanel cologne is released by a metered valve.







earlier article24 that bananas have a flavor very much like hexenol and its esters. No recent work has been done on banana oil investigation and it, therefore, seems likely to us that a thorough examination of

banana oil will reveal hexenol derivatives.

Here it is necessary to state that flavorists have for years used natural essential oils or isolates high in 2.6 nonadienol (its aldehyde or flavomatics with related odors) in strawberry, banana, and similar flavors. Unsaturated aldehydes such as 2,6 dimethyl hepten-2-al25 have been used in melon flavors or as a slight nuance in other fruit flavors for decades. However, a more thorough study of the materials nature produces from fats may lead to more characteristic flavomatics and superior flavors. Polak's articles26 on "The Biogenesis of Essential Oils" is extremely helpful to anyone studying this field. Another proposal27 that aromatics similar to those discussed in this review are formed by a continuation of the biosynthesis of fat, from odorless precursors, rather than from fat degradation certainly merits study.

A theory that flavomatics are formed by fat degradation alone does not readily explain the formation of many natural occurring materials. For example, if the saturated and unsaturated aldehydes of orange oil28 are formed by the splitting of fatty acids, does it necessarily follow that citral, geraniol, linalool, nerol which are normally associated with them in citrus oils are also decomposition products of fat like materials? Although some of these substituted unsaturated aldehydes and alcohols are related in structure to other fat-like materials (ex. steroids), it seems more likely that this class of flavomatics result from the buildup of smaller decomposition fragments, such as isoamyl alcohol or are off-shots of fat biosynthesis.

Conclusion

We can conclude by stating that fat is an important source of flavor development and that a study of the origin of flavomatics from fat is most useful. However, although some of the flavomatics derived from fat have a place in strawberry and other flavors, often those originating from protein and carbohydrate are even more important.

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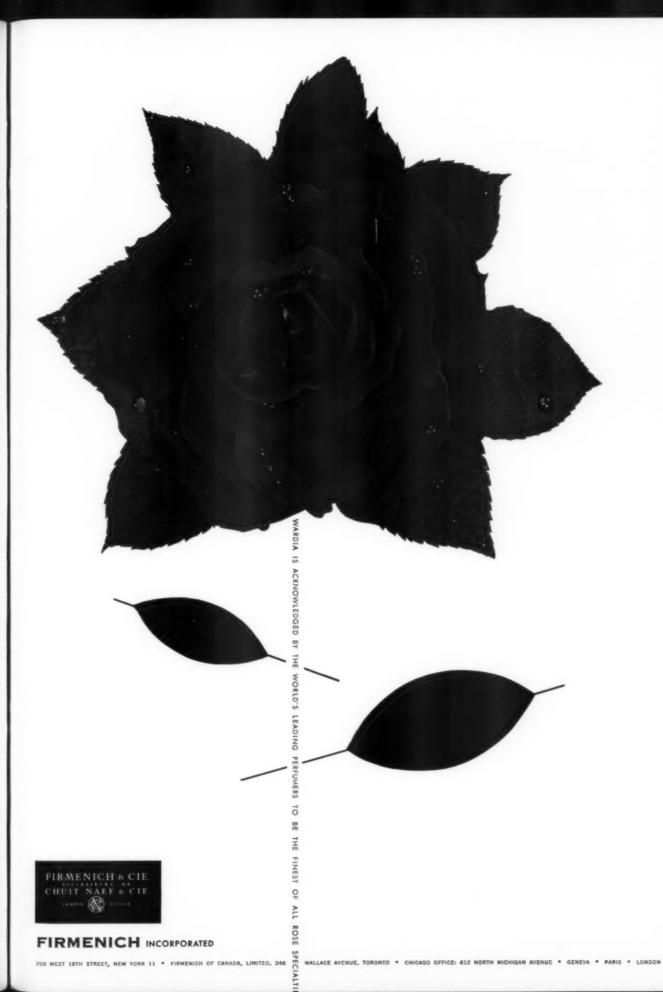
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COMPARATIVE STUDIES ON PERCUTANEOUS ABSORPTION, by D. H. O. Gemmell and J. C. Morrison (School of Pharmacy, The Royal College of Science and Technology, Glasgow, Scotland). The percutaneous absorption of salicylic acid, sulphanilamide, copper acetylacetonate, and copper sulphate through the intact skin of rabbits and the efficiency of lard, emulsifying ointment B. P., and water in the form of a five per cent carboxymethyl cellulose gel, as carriers, is compared. Blood levels were accepted as a measure of absorption. The physico-chemical properties of the drugs seemed to dictate the amount absorbed; the influence of the base was also significant, although less so. Best absorbed was salicylic acid, next sulphanilamide, then copper acetylacetonate, and finally copper sulphate, although the differences were slight between the last two; lard was the best base, then emulsifying ointment and finally water. J. Pharm. Pharmacol., 10, 553 (1958).



both chemists and perfumers since the days of M. Chuit

M. Philippe Chuit, founder of the predecessor firm to Firmenich & Cie., was that rare combination of an organic chemist capable of creating such outstanding specialties as Wardia and a perfumer of exquisite taste and skill. Such dual ability is seldom found, seldom handed on and even perfected by those who follow in the train of such genius. But so it has been. So it is today, with Firmenich continuing to develop new specialties in the field of fragrance and employing them in new creations that bear the stamp of Firmenich originality and the mark of genius of Firmenich perfumers.



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PRODUCTS & IDEAS

POLYETHYLENE SYPHON

An all-polyethylene syphon with a built-in "self-starter" is now available from General Scientific Equipment Co. The syphon consists of a semi-rigid "U" tube which has an open end and a flexible "squeeze" bulb attached to the other end. The squeeze bulb has a stopcock outlet. Available in half or quarter inch I.D. tube.

PLASTIC DRUMS

Plastineers, Inc. announces that it has developed the first rigid polyethylene plastic drum for storage and shipment of chemicals and similar liquids or dry materials. The one-piece seamless drums have $\frac{3}{16}$ inch thick walls. According to the firm, the lightweight plastic containers compare in cost with steel drums. The 18 x 35 inch drums have a liquid capacity of 38 gallons.

STAINLESS STEEL PUMPS-1

Centrifugal and neoprene impeller type pumps in stainless steel are now being produced by American Machine Products Inc. The centrifugal pumps have sealed ball bearings, and their shafts, body and cover are made of acid-resistant Type 20 stainless steel. The stationary seats are of the same material and in addition, ceramic faced. When caustics are to be pumped, Stellite seats can be supplied. All mechanical seals are corrosion resistant, and rotary faces of either pure carbon or glass filled Teflon construction are available.

American's new neoprene impeller type stainless steel units are specially designed to prevent contamination of the materials handled. Reportedly they are self priming and will pass small solids. Large carbon bearings are used to replace the conventional grease cups. The neoprene impeller type units are available in ½ H.P. and 1 H.P. models rated at 10 and 25 G.P.M. respectively and accommodate a temperature range from 35° to 150°.



2

AGITATION APPARATUS-2

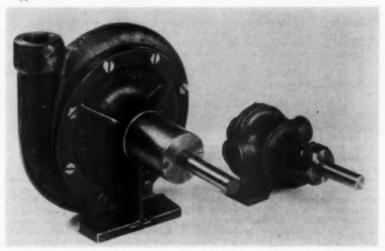
A newly designed rotary liquid agitation laboratory apparatus for use in the Cosmetics, Pharmaceutical and Chemical Specialty fields is now being produced by New Brunswick Scientific Co. Operating electrically, this unit, Model ST Spinnerette, eliminates the need for manual shaking of test tubes or small vessels. It combines the versatility of four rotating speeds with the advantage of a changing tilt angle of platform to provide optimum variation in rate of mixing or agitation. The Spinnerette consists of a stainless steel

oval enclosure in which are housed a synchronous motor and mechanical speed control mechanism. Mounted to the motor assembly is an 11 inch aluminum platform which may be titted from verti al to horizontal positions by loosening easy-grip knobs. The standard platform will hold 12 test tubes or smaller vessels. The apparatus also accommodates interchangeable platforms with holding devices for small bottles and small Erlen-meyer flasks. Rotating speeds of approximately 15, 30, 45 or 80 cycles per minute are achieved by shifting the position of the speed control handle.

CHANGEABLE CAN MIXERS

An improved line of changeable can mixers featuring vacuum tight covers has been announced by Charles Ross & Son Co., Inc. The mixers incorporate double planetary stirrer action. In addition to special covers for vacuum operation, the mixers can be provided with jackets on cans for heating and cooling material during mixing when required. The mixers are driven by variable speed motor drive and are obtainable in various sizes from the 1 gallon laboratory size to the 150 gallon working capacity size.





FRAGRANCE FOUNDATION SEES ACTIVE FUTURE



In front of a graphic presentation of the Fragrance Foundation's activities shown at its Ninth Annual Convention held recently at the Waldorf-Astoria in New York, are Foundation officers, directors and convention committee. (left to right) F. E. Shoninger of Antoine Chiris Co., F. V. Sinclair of Beauty Fashion, S. L. Mayham of the Toilet Goods Assn., H. G. Storfer of Corday, H. G. Thomas of Chanel and J. A. Danilek of Mary Chess.

Better Fragrance Sales on the Way

Dr. H. G. Thomas Outlines to Fragrance Foundation a Sound Program to get a Larger Share of American Purchasing Power

Looking forward to the future in a practical way, Dr. H. Gregory Thomas, re-elected president of the Fragrance Foundation devoted almost his entire report at the ninth annual convention to suggestions for the essentials of a sound public relations program for the coming years to give the fragrance industry the share of American purchasing power which it should have. The address was stimulating and definitely registered with the audience-the largest in the history of the foundation-which had gathered at the Waldorf Astoria hotel, New York City, October 21 for its convention.

First, in a graphic way by four pointed questions Dr. Thomas demonstrated that the projects already launched by the Foundation are not sufficient to carry out some of its objectives: 1. To increase the use of perfume and fragrance products to the point where they are universally accepted and used on all social levels: 2. To complete the process of educating American women in the needful, unquestioning daily use of fragrance products; 3. To convince the male population that fragrance is not just a special occasion gift to be indulged sparingly but rather an essential adjunct to every woman's day-in-day-out search for greater beauty and fulfillment; and 4. To go further in persuading emerging generations-tomorrow's American women-that fragrance is an indispensable asset to good grooming and mature femininity.

There is much to be done to win potential use of fragrance products by present non-users, he emphasized. Not

many new and dramatic applications have been found by the fragrance industry.

Then to expand the progress under way and add new ones he suggested a careful study of every usage of perfume even to reintroducing fragrance fashions that were popular in the past, that are still popular in other geographical areas and could be popular here and now. If these fashions have a chance of present day acceptance they should be researched.

Relationships with retailers could be strengthened by participating in plans which are developed for conducting sales-training clinics and consumer seminars. Here we would come face to fact with people who sell our fragrances and customers who buy them.

The campaign of awareness of the uses of fragrance products directed to high school and college age women he pointed out should be mightily stepped up. We should consider preparing kits for hygience and physical education teachers to use in demonstrations on the proper choice and use of fragrance products. We should implement a program whereby beauty and fragrance experts could be called upon as guest lecturers in such classes. Such a program would be welcomed by schools.

Millions of women belong to women's clubs. Their program chairmen are constantly seeking fresh material. Kits containing lessons on the use of fragrance. its selection and its benefits could be made available to these clubs, and, where requested and feasible, a guest speaker could be assigned. To do this a panel of speakers is essential. The same applies to men's clubs: men want to know how to select the right fragrances for their wives. Men too would welcome information on the ingredients and methodology which go into modern fragrance.

Much more needs to be done in the area of radio, television and motion pictures. We need new, responsible and convincing films for free distribution to women's TV programs—possibly the "open end" films which provide for local sponsorship. These would find additional use by schools and clubs. Hill & Knowlton, the public relations counsel for the Foundation is equipped and prepared to improve visibility for and mentions of perfumes and other fragrance products in major Hollywood films. Modest successes in this field have already been achieved and it could be developed into a dramatically successful effort Dr. Thomas stated.

From time to time there are excellent opportunities for radio and TV interviews of leaders in the fragrance industry. Dr. Thomas then asked the help of members in contributing a small portion of their time next year for personal appearances on radio and TV. He then suggested the use of pamphlets for "rack" programs.

The address of welcome was given by Joseph A. Danilek, convention chairman at the conclusion of the luncheon. Dr. Thomas then introduced the guest of honor, Miriam Hopkins, the TV and movie star is appearing in "Look Home-ward, Angel." Her talk was chiefly

humorous in nature. Three excellent papers were then presented. Ludwig J. Amtmann of Woodward & Lothrop, Washington, D. C. had some pointed suggestions to manufacturers and retailers alike in his talk on "Point of Sale-the Last Hurdle." Charles Granville, the energetic and resourceful president of Angelique & Co. offered some clever suggestions in his address on "What Can Publicity Do for the Manufacturer?" In it he related some of the successful publicity experiences of his own rapidly growing company. Ruth Mugglebee, woman's editor of the Boston Record and American followed with a talk, "As an Editor Sees It," and Herbert G. Storfer executive vice president of Parfums Corday Inc. offered some well considered and timely suggestions in his talk on "Point of Sale-the Last Hurdle as the Manufacturer Sees It." In it he pointed out the wisdow of providing the most fertile soil possible for the growth of customers in the way of service and advice. Are demonstrators informed about the prices of our merchandise and do they know how to sell it? Is suggested selling a general rule or do our representatives in the stores limit themselves to trying to sell a bigger bottle of whatever the customer wants? He suggested an industry-wide sales training program. The handling of stock, displays and other topics of pertinent interest were also brought up in Mr. Storfer's well considered talk.

The convention was well arranged and well managed by the skilled Joseph Danilek, convention chairman.



Exploring the Secrets of Nature

Applying new scientific knowledge to develop synthetic aromatics hitherto unknown *BULGARYOL synthetic Sulgarian rose eil Re-creating, synthetically, precious natural distillates and extracts These are problems successfully mastered * by our research chemists and perfumers. Experiences thus gained inspire to further DRAGOCO ACHIEVEMENTS

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DRAGOCO INC. NEW YORK

Influence of Fatty Acids on Soap Solubility

PAUL I. SMITH

t is well known that the chemical composition and structure of the fatty acids making up soap raw materials do influence to a marked degree the characteristics of a soap, such as solubility, detergency, foam characteristics, etc. The subject is a complex one as not only do the saturated and unsaturated fatty acids differ in their soap making potentialities, but so also do the various isometric forms of the unsaturated acids, e.g., oleic and elaidic acids. Within the range of C10-C18, soaps made from the lower range of fatty acids tend to be less soluble than the higher ones, and the saturated are less soluble than the unsaturated acids, moreover, the presence of an hydroxyl group, such as one finds in ricinoleic acid tends to improve the solubility of the resultant soap. As long as the soaper deals with natural fats as opposed to pure fatty acids, there must be inevitable queries regarding soap properties from differing raw materials. It is established that the solubility of the fatty acids themselves in water provides a reliable indication of the relative solubility of their soaps. Examining them on this basis it becomes apparent that within the range of well known saturated acids, stearic acid has the lowest

solubility and caproic acid the highest. The monosaturated acids commonly found in natural fats and oils, e.g., palmitoleic, oleic, gadoleic and erucic are less soluble than the disaturated acids like linoleic, and these in turn are less soluble than the poly-saturated such as linolenic, arachidonic and clupanodonic.

With the knowledge of fatty acid solubility it is possible to plan a "tailored" raw material, i.e., one containing those glycerides of fatty acids possessing the most desirable physical properties. This is of considerable importance as the soaper may be required to produce special types of soaps possessing distinct and carefully prescribed solubilities at set temperatures. A high stearate soap may be satisfactory when used for boiling clothes, but quite unsuitable for applications requiring a soap that will dissolve in water at temperatures below 120 deg. F. On the other hand, a liquid soap required for use in floor cleaning needs a fairly readily soluble soap based largely on oleic and linoleic acids. By use of pure fatty acids instead of glycerides of natural fats it is, of course, possible to design soaps with known and planned characteristics, all of them carefully controlled.

Efficiency of Plodding

PAUL I. SMITH

This most important process relies for its efficiency on two vital factors: first of all a high quality soap feed and second, the maintenance of optimum working conditions. No matter how well the plodder itself works, this is of little consequence if low grade fats have been used in the soap kettle, or subsequent processes, such as milling, have not been carried out properly. Provided the requisite quality of soap is maintained, and provided its physical condition is right, then good results may be expected from the plodder if the following precautions are taken in the operation of the machine:

1. The soap fed to the plodder should be of a dense consistency so as to assist the compressive action of the plodder worm.

2. The feed of soap to the plodder should be kept constant so as to prevent voids and pockets and loss of pressure. Moreover, the physical condition of the feed must be kept constant, as it is known that wide variations may cause uneven plodding.

3. The plodder nozzle should not be too hot, otherwise blistering of the soap will occur, and not too cold as the extruded bar may have an unpleasant rough surface which will affect adversely the appearance of the finished soap. Suppliers of soap making machinery usually recommend that the temperature of soap fed to the plodder should not be allowed to fall below 35 deg. C., but often fail to mention the maximum safe working temperature for the soap. This varies with different soaps, conditions of working and design of plant, and the soaper must determine his own optimum working temperature. The important factor is that whatever temperature is decided upon for a particular run of soap, then this should be maintained within half a degree or so to ensure uniformity of results.

4. The temperature of the room where the plodder is situated should be kept constant at 65-70 deg. F., and not subjected to wide fluctuations of temperature. Draughts from open doors or windows can adversely affect the general efficiency of the plant. Experience has shown that the finish of the soap in tabletted form can be adversely affected in this way.

5. The aperture of the nozzle should be kept highly polished and perfectly smooth, otherwise the extruded soap will show unsightly marks which will impair the sales appeal of the finished soap.

Many of the faults attributed to plodding can often be traced to previous processes or to the use of poor quality soap, e.g., grittiness, a legacy of drying or milling, is not reduced by plodding. Moreover, plodding will not reduce substantially the tendency of a soap to crack, or indeed to develop spotty discoloration unless, of course, this is due to iron contamination in the plodder itself.

Where trouble does occur in plodding, it is advisable to consider the extent to which this has been aggravated by improper processing in previous operations. It is, for instance, known that some toilet mills do not operate at peak efficiency due to unsuitable or inefficient design of the rear scraper which can, under the best operating conditions, minimise loss of heat in transferring the soap to the plodder.

Plodding is a sensitive operation and to achieve the maximum success great care needs to be taken to ensure

that all the conditions are just right.

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News

and Events

Michael Stanton Honored at President's Night in New York

President's Night, always an interesting event at the November meeting of the New York Chapter of the Society of Cosmetic Chemists, was again celebrated on the evening of November 5 in New York City when President James H. Baker, able head of the national Society

was the guest of honor. The occasion was also notable for the presentation of a plaque to Michael A. Stanton, founder and first chairman of the New York Chapter as a token of appreciation by the chapter which now numbers 375 members—the largest segment in the world of the parent organization—for his yeoman work in establishing the chapter and for his continued unflagging interest in its welfare. The presentation came at the close of the banquet when Chairman Harry Isacoff in a thoughtful and well considered speech paid a well earned tribute to Mr. Stanton. The presentation of the plaque came as a complete surprise to Mr. Stanton who gracefully and modestly thanked the members for the honor. The hearty round of applause that followed was an apt expression of the regard in which Mr. Stanton is held by members of the chapter. Other plaques were presented to William Lambert and to Warren B. Dennis Jr., the latter in absentia.

New officers for the coming year were then installed by President Baker of the National Society. They were: Chairmanelect, John M. Longfellow: Secretary, Saul A. Bell; and Treasurer, Dr. Martin Katz. All have served as committee chairmen or as officers. The chairman for the coming year is Theodore Ostrowski who at present is in Europe.

Following the installation of new officers President James H. Baker gave a carefully prepared talk on "That Unwanted Cosmetic Ingredient—Bacteria" which was of practical interest to all who face the problem of product preservation.

Henri Robert on Flying Trip to the United States

Henri Robert, chief perfumer and technical director of Chanel in Paris left by plane for France November 7 following a month's visit to the United States, Mexico and Cuba. While in the United States he spent some of his time in conference with executives of Chanel, Inc., New York City.

Percy C. Magnus Honored on Sixty-Fifth Birthday

Civic, banking and business leaders attended a dinner at the Metropolitan Club, New York, in honor of Percy Cecil Magnus, president, Magnus, Mabee & Raynard, Inc., on the occasion of his 65th birthday on October 22. The hosts were his brothers, Jospeh Baird Magnus and Robert Burke Magnus, Sr.

Many prominent executives and city officials were present. Congratulatory messages were read from Hon. Robert F. Wagner, Mayor of the City of New York; Hon. Stephen P. Kennedy, Police Commissioner of the City of New York; Joseph Martino, president, National Lead Co.; Hon. Grover A. Whalen and from many others.

George H. McGlynn, MM&R vice president and treasurer, announced that on the occasion of Mr. Magnus' 65th birthday, the officers, executives and other personnel of MM&R have arranged for his portrait to be painted in oils by one of America's leading artists.

DCAT to Honor Ninety-One Former Directors

Ninety-one former directors of the Drug, Chemical and Allied Trades Section of the New York Board of Trade, whose terms date back to 1915, will be honored at an Alumni Dinner to be held November 19, at the Waldorf-Astoria Hotel, New York City.

The guests of honor will be awarded "Certificates of Service" at the dinner, which will "pay tribute to those who, throughout the years, have made the organization what it is today," said Ralph A. clark, of the J. T. Baker Chemical Company, DCAT Chairman.

The dinner session will be held at the Waldorf's Starlight Roof following a reception in the Sert Room, from 6:00 to 7:30 P.M. Lloyd I. Volckening of the Ivers-Lee Company is Chairman of the Dinner Committee, and Sydney N. Stokes of van Ameringen-Haebler, Inc., is vice chairman. Other members of this committee are: Stanley I. Clark, Sterling Drug Inc.; John A. Ewald, Avon Products, Inc.; W. T. Halsted, Thos. Leeming & Co., Inc.; Louis E. Kalty, Progressive Drug Co.; George H. McGlynn, Magnus, Mabee & Reynard, Inc.; and J. A. Singmaster, Jr., Monsanto Chemical Co.

Serving as the reception committee for the event will be present members of the executive committee and advisory council.

Society of Cosmetic Chemists to Meet in New York Nov. 20

The annual meeting of the Society of Cosmetic Chemists will be held in the Statler Hilton hotel, New York City, November 20.

There will be two technical sessions, morning and afternoon with the usual enjoyable luncheon. In the evening the reception and dinner dance will be held. It will be preceded by a cocktail hour in the rotunda of the grand ballroom. As Walter Wynne is chairman of the arrangements committee a profitable and enjoyable time is assured to all who attend

The papers to be presented at the technical sessions as announced by Dr. Richard Lehne, program chairman, are:

"Notes on Aromatic Fluorine Compounds" by Dr. Glen C. Finger, Illinois State Geological Survey

"The Therapeutic Potentialities of Triglycerides" by Dr. S. G. Knight, University of Wisconsin

"Theoretical Aspects of Caries Control with Dentrifrices and Mouthwashes" by Dr. L. S. Fosdick, Northwestern Univer-

"Hair Coloring—Modern Formulation Considerations" by Robert L. Goldemberg, Shulton, Inc.

"The Rheology of Hydrophilic Polymer Solutions as Related to Suspending Ability" by R. J. Meyer & L. Cohen, B. F. Goodrich Chemical Co.

"Fluid Mixing of Cosmetic Formulations" by Dr. James Oldshue, Mixing Equipment Co., Inc.

"High Density Polyethylene Bottles" by Edward Temple, Plax Corp.

Louis DeJoie, Haiti Essential Oil Producer, Flees for His Life

Louis DeJoie, former president of Etablissements Agricoles et Industriels Louis DeJoie, of Haiti, who is well known in the United States as a producer of vetivert and other essential oils, has been deprived of his company and had to flee for his life following his defeat for President of Haiti by a terrorist group headed by Francois Duvallier. For six months after the seizure of his company and its properties he remained in hiding. When a price was placed on his head he sought the protection of the Mexican Embassy, which arranged a safe conduct to Mexico where he obtained a United States resident visa. Even in the United States threats against his life have reached him.

Mr. Deloie reports that the collapse of the Haitian government seems certain on account of its terrorist tactics; and when that occurs his company will be restored to him and the manufacture of vetiverd and other essential oils will be resumed. Meanwhile he cautions there is enough Haitian produced vetivert on hand to last for six months and the present prices quoted by the present government which now controls the company are artificially high.

NATIONAL CHEMICAL CREDIT ASSN. ELECTS OFFICERS



Newly elected officers of the N.C.C.A. are left to right: Secretary J. Belmont, Vice Chairman O. C. Yaeger, Chairman J. P. Somnerville, Treasurer W. Fine.

Nine-Months Earnings Up For Colgate Palmolive

The Colgate-Palmolive Co. ninemonths earnings and sales exceeded the high levels reached last year. Consolidated net income for the first ninemonths of 1958 amounted to \$14,776,000 as compared with \$14,459,000 in the corresponding period of 1957.

For the third quarter of 1958, consolidated earnings were \$6,421,000 as

compared with \$6,243,000 in the third quarter of last year.

Consolidated sales for both the third quarter and for the first nine months of 1958 were at an all-time high.

Sales for the nine months were \$403,-539,000, as compared with \$388,223,000 for the preceding year. For the third quarter of 1958, sales totaled \$138,093,-000 as compared with \$133,348,000 in the same quarter of 1957.

National Chemical Credit Assn. Holds Monthly Meeting

The October 16 meeting of the Eastern Division of the National Chemical Credit Assn. was held at the Shelbourne Hotel, New York City. The featured discussion of the luncheon program was "Credit Committees and their Influence upon Maximum Dividends from Financially Embarrassed Debtors" and included Group Chairman James Somerville (Merck & Co.) as moderator, with Vice Chairman Oscar Yaeger (Rohm & Hass Co.) as chief speaker. The Eastern Division represents forty-seven chemical companies and meets every third Thursday of the month.

Revion Inc. Wins Two Promotion Awards

Revlon, Inc. scored a new merchandising triumph this year when 5,000 food industry executives and merchants voted two "Top Promotions of the Year" awards to the cosmetics manufacturer—the first ever given for cosmetics in the annual poll sponsored by Topics Publishing Co. One of the awards, announced over the weekend, is for advertising of Revlon products, while the other is for the introduction of Top Brass Hair Dressing for Men. In each case, a plaque presented to the company identified the award as "a promotion voted outstanding in sales results by food chains, wholesalers, supermarkets and independent grocers."



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Dr. Emil Klarmann Again Honored for His Scientific Achievements

Dr. Emil G. Klarmann, former president and one of the medalists of the Society of Cosmetic Chemists whose research activity led to the expansion of the Dorothy Gray and Tussy lines of Cosmetics through the development of scientifically controlled skin care products, has again been honored for his scientific achievements.

He has been named as recipient of the Achievement Award of the Chemical Specialties Manufacturers' Assn. and will be presented the award in New York City, December 10. Incidentally Dr. Klarmann is a former president of the association. As a leading researcher in biochemistry he is being honored for his work in the fields of disinfection and sanitation which has stimulated significant progress in these industries.



Dr. Emil Klarmann

Dr. Klarmann is vice president in charge of research for Lehn & Fink, Bloomfield, N. J. with whom he has been associated for 34 years. He received his education at the Technological Institute of Bruenn and the University of Halle and earned the degrees of Chemical Engineer and Doctor of Science. He was also awarded the honorary degree of Doctor of Science by the Philadelphia College of Pharmacy and Science in recognition of his scientific work in promoting public health.

Dr Klarmann is a lecturer in dermatology and syphilology at the New York University Graduate School of Medicine and is a member of numerous scientific societies and the author of many technical papers some of which have appeared in American Perfumer and Aromatics.

NWDA Convention Stresses Greater Service

The prevailing theme of the 84th Annual Meeting of the National Wholesale Druggists' Assn. was how to provide greater service for the customer. More than fourteen hundred men and women, representing drug wholesalers, manufacturers and retailers attended the convention in Miami Beach, making it the largest meeting ever held in the history of the association. The keynote address entitled, "The Customer Will Be Served," was made by Norman H. Strouse, president of J. Walter Thompson advertising agency.

REHEIS CO. ADDS EXECUTIVE WING



Architects drawing of the modern, air conditioned executive office wing being added to the Berkeley Heights, N.J. headquarters of the Reheis Co. Construction of the steel and glass paneled structure is expected to be completed by January.

Procter & Gamble Million Dollar Annual Aid to Education

President Howard J. Morgens of the Procter & Gamble Co. has announced that 47 colleges and universities including ten women's colleges will award 60 Procter & Gamble scholarships for the 1959-1960 school year as part of an educational aid program of one million dollars a year. The scholarship plan provides 240 four year scholarships one fourth of which are awarded each year.

Cheminform Institute Offers Chemical Information Service

Chemiform Institute, Coliseum Towers, New York City, has inaugurated a chemical information service. A file of trade marks in the chemical and allied fields is available. It covers registered, unregistered, common, trivial, foreign, scientific and technological names in every type of chemical using industry; and is international in scope. H. Bennett and E. Rosendahl are directors.

BEAUTIES GRACE MAX FACTOR SALES MEETING



Max Factor Sales Meeting Toasts Golden Anniversary

Fifty years of beauty was the impressive theme of Max Factor & Co.'s national sales meeting held in Chicago, October 11, which was attended by home office executives and sales representatives from all over the United States.

The day-long meeting, presided over by Lee Rosene, director of U.S. sales for Max Factor, served to commemorate a business span of 50 years and to outline plans for the company's golden anniversary which will begin the early part of 1959.

The opening address was given by

Alfred Firestein, vice president and director of U.S. marketing, as he welcomed the record gathering of over 200 of the firm's sales and advertising force.

One of the highlights of the meeting was the surprise appearance of seven beautiful blonde models in gold lamé bathing suits, created especially for the occasion by Rose Marie Reid. The girls made their entrance carrying a giant birthday cake with 50 candles in it. This was followed by the showing of a series of photo slides, narrated by Davis Factor, Sr., chairman of the board, which depicted the progressive 50 year history of the world famous cosmetic company.

New Research Laboratories and Offices of Givaudan-Delawanna Inc.



Mr. E. R. Durrer, President, (right) and Mr. H. F. Duffy, Treasurer, meet in the President's office for a business discussion.



An elaborate procedure is used in the Aerosol Laboratory to test aerosol fragrances under all possible use conditions. One of the tests to which all products are subjected is exposure to heat in the even. Here, the perfumers check the odor of a given product to ascertain whether or not it has undergone any change.



The cosmetic chemist checks the temperature of an emulsion in the water bath.



Studying the application of aerosol packaging to the food industry, the chemists of Givaudan have found solutions to many of the problems involved in the use of this new medium. The Aerosol Laboratory of the Givaudan organization is fully equipped with the most modern apparatus to facilitate the food aerosol research constantly in progress.

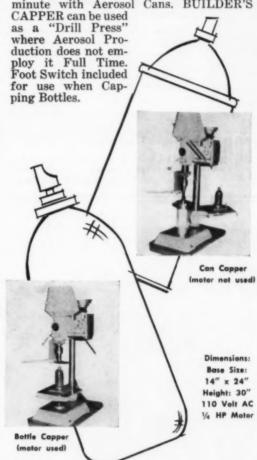


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NOTABLES AT RECENT SCC SEMINAR



Groups at the Fifth Annual Seminar of the Society of Cosmetic Chemists: Warren Godfrey, Dr. Sophie Plechner, Constantin Zannis; Robert J. C. Pickard, Hans Wagner and Dr. Victor Fourman.

Society of Flavor Chemists Program for December 4 meeting

The Society of Flavor Chemists regretfully accepted the resignation of Louis Strasburger, van Ameringen-Haebler Inc., as president of the group on account of ill health at its October 9 meeting. Dr. David Jorsch, H. Kohn-stamm & Co., succeeded Mr. Strasburger as president. He appointed the necessary committees and outlined the program for the coming year.

The next meeting will be held December 4, when a new vice president will be elected and a group of speakers from the aromatic chemical industry will discuss aromatics as they pertain to flavors. Albert Fiore, Givaudan-Delawanna Inc., will speak on "Mutual Responsibilities of Aromatic Chemical Manufacturers and the Flavor Industry.' Louis Hettiger, Trubek Laboratories, will speak on "Now Flavomatics of Interest to the Flavorist." Dr. Ernst Theimer, van Ameringen-Haebler Inc., will take as his subject "The Role of Modern Instrumental Methods of Analysis and their Value to the Flavor Chemist." Guests will be permitted at the meeting. Reservations may be made through the secretary, Thomas Bonica, Polak & Schwarz, Inc., 100 Green St., Teterboro, N. J. The February meeting will be devoted to speakers from the essential oil industry.

Kolar Laboratories Purchases Two Buildings



This building is one of two structures with a combined total of 137,000 square feet of floor space purchased by Kolar Laboratories Inc. of Chicago, for the manufacture of cosmetics and toiletries.

Program for T. G. A. Scientific Section Meeting December 8

The 28th meeting of the Scientific Section of the Toilet Goods Assn. will be held in the Sert room of the Waldorf-Astoria hotel, New York, December 8. The following papers will be given:

Measurement of Color Impressions, by G. B. Levy, Ph.D., Photovolt Corp.
Contribution to the Problem of Pos-

sible Skin Irritations by Lipsticks, by Otto Jacobi, Kolmar Research Center, Wiesbaden, Germany.

Antiperspirant Testing: A comparison of Two Methods, by E. W. Daley, Procter & Gamble Co.

Effects of Chronic Inhalation of Hair Sprays in Experimental Animals, by Dr. Joseph Calandra, Bio-Test Laboratories.

Alkyl Sulfates: Their Stability to Hydrolysis, by R. R. Reed and W. G. Fredell, Warner-Lambert Research Institute.

Converting Laboratory Concepts to the Consumer Market, by Robert E. Spinner, Marketscope Research Co.

Polyolefins as Packaging Materials for Toiletries with Special Reference to Poly-propylene, by William O. Bracken, Her-cules Powder Co.

Premier Mill Corp. Launches Expansion Program

Premier Mill Corp of Auburn, N.Y. announces that it is again in the position to produce and deliver its patented colloid mills and dispersators

Mr. and Mrs. Shepherd Begin European Trip



Photographed aboard the Cunard superliner Queen Elizabeth, are Mr. and Mrs. H. R. Shepherd. Mr. Shepherd is president of Aerosol Techniques, Inc. of Bridgeport, Conn., and will be in England and Europe on industry business. He is a member of the Board of Directors of Midland Aerosols, Inc., of Wolverhampton, England and is regarded as an authority on pressurized packaging.

P. K. THOMAJAN CIBS SEPTEMBER SPEAKER



P. K. Thomajan, advertising consultant, was the speaker at the September CIBS Meeting. His topic "Advertising Gimmicks," was highlighted by the use of illustrations. Shown after the talk are (I to r) Jay Stephens, Dr. Samuel Zuckerman, Mr. Thomajan, William Jaeger and Mr. Greenberg.

N. E. Section, American Oil Chemists to Meet December 2

The Northeast Section of the American Oil Chemists Society is to hold its second dinner meeting of the 1958-1959 season at the Military Park Hotel, Newark, N.J. on the evening of December 2. Dr. Morris Mattikow will discuss the "CSA Process for Refining Oils."

Lentheric's Christmas Ad Becomes Trade Mailer

As part of an all-out push to put the Lentheric Christmas ad story into the hands of cosmetic buyers, Lentheric has created an unusual "hard sell" mailer. A reproduction of the Christmas ad, it outlines Lentheric's complete Christmas advertising plans.

Essential Oils from Sicily

(From our Messina, Italy, Correspondent)

The new production of essential oils, juice of fruits and pickled rinds is on hand. As regards essential oils, it is possible to give some information covering the outlook.

Lemon Oil—In the month of November manufacturing will start, which is expected to be excellent, perhaps even better than that of last year. The price should be lower than the one now prevailing for the quality 4% citral.

Bergamot Oil—The production, which

Bergamot Oil—The production, which will begin early in January, will be equal to last year. From an unofficial source we learn that it is expected to be between 150 and 170,000 kilos. Current price of Frs. 10,500 for quality 38% linalyl acetate will be maintained.

Sponge Mandarin Oil—The quantity expected will be slightly less than normal. At this time it is not possible to advance any information covering the orientation of the current price of Frs. 700.

China Orange Oil—An excellent campaign is foreseen. It is too early, however, to forecast, because climatic conditions play an important role in the production of this oil, which will begin in December. Its current price is Frs. 3000.

Bitter Orange Oil—Information is about the same as in the case of China Orange. The crop will start about December 15, and its present price is Frs. 3,600 per kilo.

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Perfumes and cosmetics are to be manufactured in Puerto Rico by Fonttenac Amerique Inc., Paris, France, in a plant now being erected in San Juan. The firm is owned by John and Felipe Lauhoud of Venezuela. Other Fontenac operations are carried on in Spain, Switzerland, Germany, Italy, Venezuela, Cuba and Colombia, S. A. Initially the products of the Puerto Rico operation will be distributed only there but later it is planned to enter the United States market. Soaps are to be added later.

Lysol disinfectant, a leader in the Lehn & Fink Products Corp. line, now comes in pine fragrance.

The vogue, for colored nail polish started in 1916 by the Northam Warren Corp., Stamford, Conn., is being featured in a national advertising campaign in seven major women's consumer magazines.

French Flair in twelve shades is the name of a new pressed face powder launched by Coty Inc. It comes in a gold toned metal compact and retails for \$1.50.

A new "On the Wind" gift set is being offered by Bourjois Inc., New York City, as well as a new Evening in Paris roll-on deodorant lotion. The former retails at \$2 and the latter at 75 cents.

Cellini Bronze, a shade for Autumn lips and fingertips, is being offered by Juliette Marglen, New York City. The lipstick is oval in shape. Matching nail glace is also offered and the retail price of both is \$5.50.

Tweed toilet water, in a new spillproof, travel-perfect flacon called Vagabond, is being offered for the Christmas trade by Lentheric Inc.

Daytime Moon Drops, a moisture foundation to wear under make-up is being offered by Revlon Inc., New York City.

A conference on food additives is scheduled for November 24 and 25 in Washington by the Food & Drug Administration and the Food Law Institute.

A cosmetic center for the manufacture of cosmetics is to be opened on a 5-acre tract in Trenton, N. J. by the Cosmetic Center Realty Corp.

Cholesterol products are to be made by the Carnation Co., Los Angeles, Calif., producers of evaporated milk and other milk products.

Germaine Monteil Cosmetiques Corp., is to move to new headquarters at 750 Fifth Ave., New York City.

The Organic Chemicals Division of the Glidden Co. is the new name adopted by the parent company in Cleveland, Ohio, in place of the Southern Chemicals Division in order to mark the trend of the division towards new developments in organic chemistry. The division which is located in Jacksonville, Florida, developed a process for manufacturing synthetic geraniol and is to manufacture synthetic menthol on a large scale in a new plant in Jacksonville.

Chanel Inc. if offering Chanel No. 5 Cologne in an aerosol which dispenses over 800 measured applications. The retail price is \$5.

Nine workshop sessions have been planned for the deluxe convention of the National Beauty and Barber Manufacturers' Assn. convention in the Concord Hotel, Kiamesha, N. Y. May 21-24, 1959, owned and operated by Arthur Winarick who made a fortune in the beauty and barber supply business.

For use in the shower bath a new bath oil preparation, Bathe N'Glow has been launched by Trylon Products Co., Chicago, Ill. It comes in a 7-ounce aerosol. It is claimed to restore necessary oils to the dry skin on which it is sprayed. The aerosol is said to contain enough bath oil for 60 showers.

Warner-Lambert Research Institute has been established by the Warner-Lambert Pharmaceutical Corp. under the direction of Dr. Estle Arnow.

A chain of discount houses is to be developed by Sun Ray Drug Co., Philadelphia, Pa. and Blauner's, a women's apparel retailer. Three have already been established under the name of "Bargain City, U.S.A." The stores will carry a variety of items.

Television sets in the United States now in use total 47,000,000 according to the Television Factbook. There are 529 tv stations.

Cosmetic industry salesmen are traveling further this year trying to equal their 1957 sales volume according to data compiled by Michael Braude president of Emkay Inc., Chicago the third largest fleet leasing firm in the U. S. The company leases cars nationally to companies for use by their sales forces. Mileage records are kept and analyzed by the company.

Sales of cosmetics in the Publix Supermarket chain in 1957 were \$1,218,300 or 1.6% of the total sales of all products sold by the chain.





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GERSONALITIES

Karl Fink, FPDC, head of Karl Fink & Associates, has been elected president



Karl Fink

of the Package Designers Council. Mr. Fink, who was a founding member of the Council, formerly served as secretary and as executive vice-president.

G. Fisher Smith has been appointed advertising manager of Aloe Creme Laboratories, according to a recent announcement by Rodney M. Stockton, president of the firm. Mr. Smith has had considerable experience in market research and in advertising. In his new position, Mr. Smith will direct all local and national advertising, working with Calkins & Holden, the firm's advertising agency.

Max Firestein, executive vice president of Max Factor & Co. was one of the leading delegates of the Fifth United Jewish Appeal Study Mission in Tel Aviv early this month.

Thomas L. Bonnitt has been appointed manager of market development at Morningstar-Paisley, Inc., according to an announcement by E. C. Lenz, vice president of sales.

Andrew L. Johnson has been named president and research director of the recently established Glass Container Industry Research Corp. of New Castle, Pa.

Irwin M. Rosenbaum has been appointed technical sales representative of the Geigy Industrial Chemicals, Division of Geigy Chemical Corp., for Eastern Pennsylvania, Maryland, Delaware and the Southeastern states. Mr. Rosenbaum joined Geigy Industrial Chemicals in 1957. During his period in the Customer Service Laboratory, Mr. Rosenbaum was engaged in the studies of chelating agents, optical brightening agents, U.V. absorbers, and surface active agents.

Robert S. First, industrial consultant, has opened an office at 6 East 39th Street, New York, to serve the chemical, plastics, pharmaceutical and rare metals industries. Mr. First will specialize in studies on diversification and expansion, distribution, and marketing.

Formerly manager of marketing research for the Atlas Powder Co. and for the Plastics Division of the Celanese Corp. of America, Mr. First has been associated also with National Lead Co. and with Sharp & Dohme, Inc.

Emmett P. O'Rourke has been named sales branch manager of the Glass Container Division of the Owens-Illinois Glass Co.

Edward J. Keller of the Maintenance Dept. of Fritzsche Brothers Inc., New York City has joined the company's quarter century club. Preceded by his uncle, still active after 42 years and his father who retired after 36 years, the induction of Mr. Keller brings to over 100 the years of service the Keller family has devoted to the company. He was presented with a government bond and an engrossed scroll from the officers and directors and a TV set from his fellow employes.

Mark K. Dresden who recently resigned as president of A. H. Wirz Inc. after nearly 25 years of service has been succeeded by Robert F. Cox. Mr. Cox joined A. H. Wirz Inc. in 1942 and became vice president in charge of production in 1954.

T. H. Elder has been appointed sales manager of the American Alcolac Corp., Baltimore, Md.

William G. Mennen Jr., executive vice president of the Mennen Co., Morristown, N. J. in order to put into practice a lot of things that he feels should be done has taken over the post of advertising manager of the company which he plans to hold for one year. He will be assisted by Michael Jackson. The advertising manager Leonard Colson, who resigned in September has joined the staff of Warwick & Lengler, one of the company's advertising agencies.

Dr. Grayson Kirk, president of Columbia University has appointed Charles Lackman, senior vice president of Revlon Inc., New York City as general chairman of the cosmetic division of the Muscular Dystrophy Assn. in its appeal to industry and the professions.

Fernand Torino, chief perfumer of Comphania Brasileira Givaudan, Sao



Fernand Torino

Paulo, Brazil, recently spent two weeks in the United States visiting the Givaudan Corp. During his stay, Mr. Torino toured the Givaudan plant in Delawanna, New Jersey and familiarized himself with the perfumery research and developments of the organization. One of the objectives of his visit was the closer co-ordination between the perfume creative laboratories in the United States and Brazil.

Austen Ettinger, formerly sales development manager for the Moore Publishing Co. and later advertising promotion manager for the McCall Corp. who played an important role in the development of Red Book magazine has been made assistant publisher of that publication.

Dicran P. Kazanjian has been appointed purchasing agent for the Felton Chemical Co., Brooklyn, N. Y. He has



Dicran P. Kazanjian

been associated with the company for 18 years successively filling positions of plant engineer, assistant to plant super-intendent, process and development engineer and assistant purchasing agent.

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Audrey Langdon, formerly with Colgate Palmolive Co. but now associated with W. Alec Jordan Associates, New York City, gave a talk to the Chemical Market Research Assn. Workshop on "Advanced Market Research Techniques," at French Lick, Ind., September

Philip Schnering has been named assistant to President John N. Curlett, president of McCormick & Co., Baltimore. Md.

Arch Payne, sales manager for Florasynth Laboratories Inc., New York City, presented the annual Florasynth fellowship to Arnold I. Epstein of Rutgers University for the 1958-1959 academic year, October 15. It is given to an outstanding student doing graduate work in food science chosen by the Institute of Food Technologists.

Dr. John W. Dargavel, executive secretary of the National Assn. of Retail Druggists and chairman of the Bureau of Education on Fair Trade is the first non-Canadian to receive the "Man of the Year" award of the Independent Retail Druggists Assn. of Quebec, Canada. The award will be presented November 22 at a banquet in Montreal. The award to a non-Canadian reflects the interest of Canadians in "orderly marketing" legislation in the Commonwealth and Dr. Dargavel's leadership in the fair trade movement in the United States. Up to a few years ago manufacturers in Canada were permitted to establish minimum resale prices of their trade marked products; and "orderly marketing" legislation now proposed in Canada would restore these rights.

Edward Tabubuan has joined the Colgate-Palmolive Co. as merchandising manager of the Household Products Di-

Louis E. Santamaria has been appointed executive vice president and general manager of the Revion International Corp., New York City.

Robert K. Sun, Honolulu, T.H., has been appointed to represent 42 Products Ltd., Inc. and Executive Toiletries Ltd., West Los Angeles, Calif. in the Hawaiian Islands. Mr. Sun is handball champion of the territory and is a member of the Hawaiian Air National Guard.

Harold J. Brunette has been appointed to the newly created position of Production Planning and Packaging Manager for John H. Breck Inc., Springfield, Mass.

Gordon F. Pursey, import sales manager for Jacobson van den Berg & Co. (U.K.) Ltd. sole agents for Magnus Mabee & Reynard Inc., New York City in the United Kingdom was a recent visitor to New York where he conferred with President Percy C. Magnus on plans for the expansion of the company's overseas marketing activities.

Seasonal Demands Fail to Check Declines

A seasonal upturn in the demand for essential oils and aromatic chemicals has failed to check the downward price trend in a number of articles. Rosewood oil from Brazil lost further ground which in turn brought about a softer tone in linalool linalyl acetate and some of the other esters. Citral registered a further decline, and a soft tone continued

to prevail in orange oil, cananga and lavender. A few articles displaying a marked degree of strength include oils spearmint, lime, bergamot, vanilla beans and gum styrax. The seasonal upturn in demand was spurred by an upturn in general business; gains in securities; and an overall improvement in the general economy.

TRENDS IN DETAIL

Advances	Current	Previous
Coconut oil, tanks, coast	\$ 0.151/8	\$ 0.141/2
Copra, coast, ton	201.00	197.00
Stearic acid, single pressed	0.16	$0.15\frac{1}{2}$
Grease, white	$0.08\frac{1}{2}$	0.081/4
Oil rue	3.00	2.85
Oil spearmint	6.25	5.75
Oil vetiver, Haitian	10.50	10.00
Declines		
Oil orange, W. I., sweet	\$ 2.75	\$ 3.00
Oil almond, sweet	0.85	0.90
Oil clove	2.65	3.00
Oil geranium, Bourbon	19.00	19.50
Citral	3.00	3.50
Oil lemongrass	0.90	0.95
Oil rosewood (bois de rose)	1.95	2.00
Geraniol		
Soap grade	1.35	1.50
Extra	2.45	2.60
Oil Palmarosa	3.50	3.75
Citronellol	2.75	3.00
(Prices per pound unless otherwise	specified)	

ALCOHOL QUIETER-

While good quantities of alcohol are continuing to go into the toiletry, proprietary and closely related trades, there has been a marked letdown in new business. Many large buyers are fairly well covered on anticipated requirements over the remainder of the year against purchases that had been made prior to October 1 when prices on all formulae were boosted by 5 to 7 cents per gallon depending on the grade. Higher denaturing and other costs was the reason extended for the advance, the first in a long time.

MINT OIL OUTLOOK FIRM-

The supply position in spearmint oil is strong. There was virtually no carryover of oil from last year's crop, and this year's production has been estimated at 10 percent below the output a year ago. There was a wide range in the prices named for limited amounts of spearmint. Some dealers were selling small lots at \$6.25 per pound while others reported booking orders at \$6.90 to \$7.10 a pound.

Prices on peppermint have failed to show any material change but shrinking supplies of high test oil, particularly brands most popular in the export market, have tended to create a firmer feeling among some suppliers regarding the longer term outlook. There was a good crop this year, however, and there should be good quantities of low test oil in the market.

OIL ROSEWOOD IN GOOD SUPPLY-

Greater availability of synthetic bois de rose, or rosewood oil, and sluggish demands for the natural oils from Peru and Brazil are factors behind the generally soft tone to the market. Prices have declined to a new low level ranging from \$1.95 to \$2.35 per pound according to quantity.

BERGAMOT FIRMS IN ITALY-

A jump in oil bergamot prices in Italy was attributed to a recent decision by the Consortium that in the future bergamot oil exported to world markets will have a minimum of 40 percent esters. Current spot prices, following a series of advances

over the past year, are approximately 30 to 35 percent above the levels of a few years ago.

STEARIC ACID HIGHER-

Improved demand for stearic acid, accompanied by increasing costs of basic materials brought an advance in stearic acid prices. Single pressed material rose from 15½ to 16 cents per pound, while double and triple pressed grades were moved up to 16½ cents and 18¼ cents, respectively.

GLYCERIN POSITION IMPROVES-

Glycerin stocks dropped to 58,513,000 pounds in August from 63,324,000 pounds in the previous month while production rose to 18,112,000 pounds from 13,809,-000 pounds in the same period. The upturn in production in August was not surprising since July production usually runs at a low rate due to vacation shutdowns at soap plants. Domestic demand for glycerin has been gradually increasing since the start of the Fall season reflecting an improvement in general business as well as stepped up operations on the part of manufacturers working on an extended line of winter items and holiday goods.

CROP INFLUENCING GERANIUM-

Shipping prices declined rather sharply on oil geranium from the Reunion Island as the result of new crop influences. Since the Fall crop is usually smaller in size than the Spring crop, fresh receipts of oil may bring only temporary relief to the generally tight supply position of the market. Prices on Algerian geranium oil remain firm and high with internal conditions in the primary center continuing to cloud the outlook regarding future supplies.

ORANGE OILS SOFT-

A seasonal upturn in demand for orange oil in the confectionery trade has thus far proved insufficient to offset the generally long supply position particularly in Floridian oil. In keeping with late declines in orange oils from California and Florida sweet orange oil from the West Indies was recently reduced in price. The latter article was cut from \$3 to \$3.25 to \$2.75 to \$3 per pound.

MENTHOL DEMAND LAGGING-

With many large consumers in the tobacco, pharmaceutical and miscellaneous trades being fairly well covered on anticipated winter requirements, trade in the spot market continued quiet over the past month. Prices, while generally unchanged, were soft due to the presence of good stocks here.

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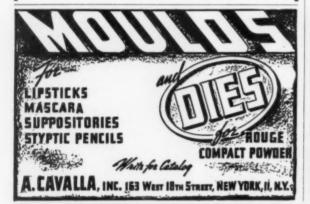
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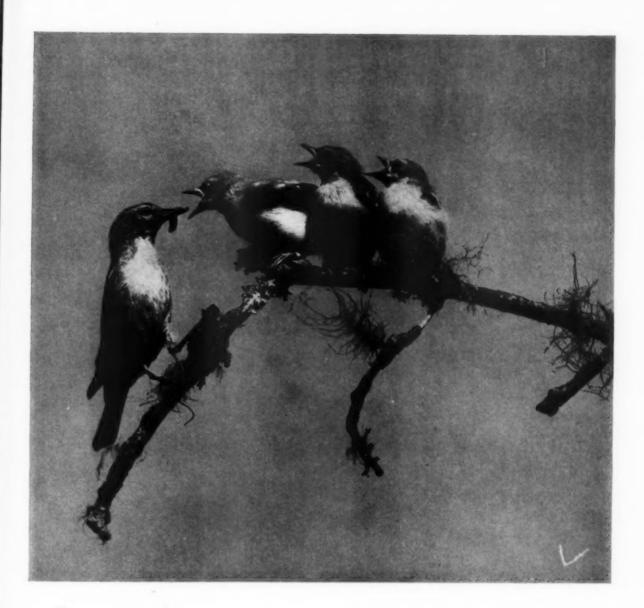
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